

U.23(1-4)

Vols. 23, 24 & 25 complete

1987

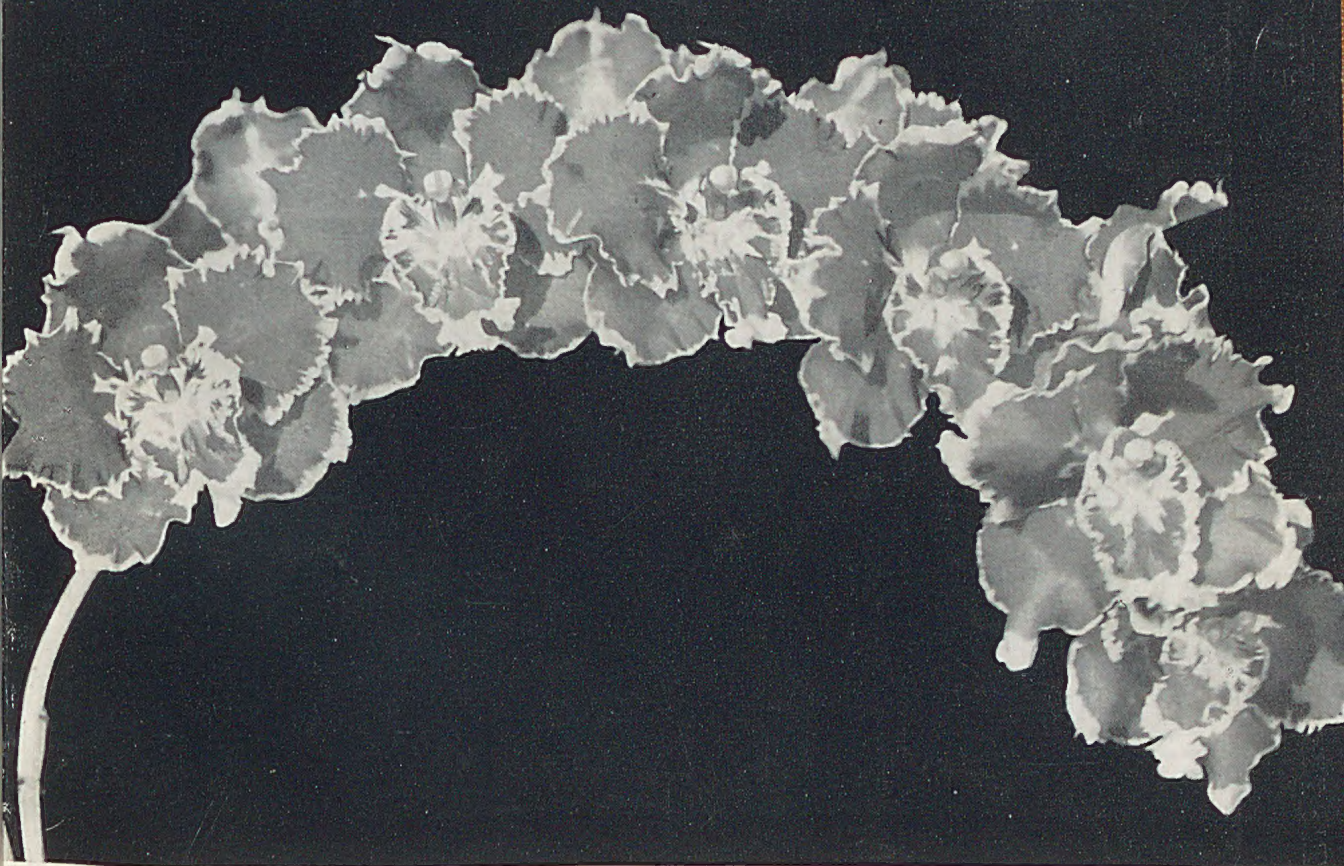
Australian Orchid Review

PUBLISHED QUARTERLY

VOL. 23. No. 1

PRICE 3/6

MARCH, 1958



ODONTOGLOSSUM TROMAR 'SILVER LINING'

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.



The Illustration below depicts Orchid splendour at Frank Slattery's Nursery.



Australian Orchid Review

A

Composite Index

to

Volumes 23, 24 and 25—1958, 1959, 1960

Compiled by A. A. Johnson

NATIONAL HERBARIUM
LIBRARY

ROYAL BOTANIC GARDENS,
STH. YARRA, S.E.1, VIC.

15 JUN 1962

Comprising

<i>Index to Articles</i>	- - - - -	Page 3
<i>Index to Illustrations</i>	- - - - -	Page 7

Australian Orchid Review

PUBLISHED QUARTERLY

The Official Organ of the

THE ORCHID SOCIETY OF WESTERN AUSTRALIA
THE ORCHID SOCIETY OF NEW SOUTH WALES
THE ORCHID CLUB OF SOUTH AUSTRALIA
THE QUEENSLAND ORCHID SOCIETY
THE TASMANIAN ORCHID SOCIETY
THE VICTORIAN ORCHID CLUB



Published by

SHEPHERD & NEWMAN PTY. LTD.

Yurong Street, Sydney, Australia.

Subscription Rates: Australia and New Zealand, 12/6 per annum;

Overseas, 12/6 sterling per annum. Post free. Single copy, 3/6

Advertising Rates obtainable from the Proprietors.

INDEX TO ARTICLES

	Vol.	No.	Page	Vol.	No.	Page
A Strange Incident	25	1	14			
An Effective Orchid Display	25	2	80			
Angulocaste Olympus	25	4	183			
Angraecum sesquipedale	25	1	30			
Annual Shows	23	2	95	24	3	148
	24	2	81	25	2	85
Anthuriums, the Unmatchable	25	3	137			
Appreciating Natures Freak	23	3	119			
Arpophyllum spicatum	25	4	169			
Ascentrum miniatum	25	4	171			
Aspasia—in hybridising	23	3	142			
Australia, Around	23	1	34			
Australian Orchid Council	25	4	168			
Australian Orchid Growers Trading Co-operative Society	23	1	37			
Autumn Culture in N.S.W.	24	1	26			
Autumn Culture in Queensland	24	1	41			
Autumn Culture in Victoria	24	1	22			
Award description with illustrations	24	1	23			
Awards of N.S.W. Orchid Society inc.	23	1	21	23	2	95
	23	4	199	24	4	177
Beat This	25	1	33	25	2	83
	25	3	127			
Beauteous Thought	25	4	200			
Beginners' Level	24	3	127			
Begg A.—An appreciation	23	4	186			
Bifrenaria harrissoniae	25	1	28			
Blue Mountains Orchid Society News	24	1	25	24	2	83
Book Reviews:—						
Manual of Cultivated Orchids—A. D. Hawkes	25	1	29			
Orchids and their Culture—B. Hogg	23	3	127			
Orchids in Australia—F. Moulen	23	4	184			
The Charm and Diversity of Orchids—M. M. Vacherot	23	3	127			
Brassia—in hybridising	23	3	143			
Broughtonia sanguinea	25	4	170			
Bulbophyllums—Why I like	25	3	133			
By Laws of Orchid Society of N.S.W. Ltd.	24	3	120			
By Laws of Orchid Society of N.S.W. Ltd. 3 (c)	24	2	75			
15 (d) 1	24	2	71			
15 (d) 6	24	2	80			
Camden Orchid Society	24	4	200			
Can Cymbidiums be grown anywhere?	25	1	39			
Caton R. H., the late	24	2	90			
Cattleya, Never Repot a	23	1	33			
Cattleya skinneri alba	25	4	170			
Chysis bractescens	25	4	170			
Christmas Greetings	24	4	200			
Climate and Orchid Culture	23	1	15			
Codes of Nomenclature as they apply to Orchids	24	2	91			
Coffs Harbour Orchid Society	24	4	200			
Coelogyne mooreana	23	2	93			
Coelogyne. Some easily grown in N.S.W.	24	3	132			
Common Orchids have Special Interests	24	4	191			
Commonwealth Bank Orchid Society—Show	24	4	197			
Composts (Queensland)	24	2	71			
Compost for Cymbidiums, An Organic	25	4	184			
Conversation Piece	24	4	173	25	2	75
Correspondence Interesting	25	2	64			
To the Editor	24	2	74			
Coryanthes macrantha	24	4	173			
Cryptostylis	25	2	75			
Cultural Notes for Tasmania	24	3	142	24	1	36
	25	2	68			
Culture of Cattleya (Queensland)	23	1	33			
Culture of Coelogyne mooreana	23	2	93			
Culture of Cymbidiums (N.S.W.)	23	1	28	23	2	71
	23	2	66			
Culture of Cymbidiums (N.S.W. compared to Victoria)	21	1	15			
Culture of Cymbidiums (U.S.A.)	23	2	89			
Culture of Cymbidiums (Victoria)	23	2	67			
Culture of Cypripediums (N.S.W.)	23	1	32			
Culture of Cypripedium venustum	23	4	170			
Culture of Dendrobiums (Hawaii)	23	2	81			
Culture of Dendrobiums (N.S.W.)	25	2	79			
Culture of Oncidiums—in general	23	4	181			

	Vol.	No.	Page	Vol.	No.	Page
Culture of <i>Oncidium cruciata</i> group (sarcodes, gardneri, forbesii, etc.)	23	4	177			
Culture of <i>Oncidium lanceanum</i>	23	4	176			
Culture of <i>Oncidium ornithorhynchum</i> group	23	4	178			
Culture of <i>Phalaenopsis</i> (Hawaii)	23	1	26			
Culture of <i>Phalaenopsis</i> (Southern Queensland)	24	4	176			
Culture of <i>Vandas</i> (N.S.W.)	25	2	68			
Culture—use of plastic pots	24	4	189			
Cymbidium care and cultivation of	25	2	66			
Cymbidium comparisons	24	1	16			
Cymbidium culture (N.S.W.)	23	1	28			
Cymbidium culture (Victoria)	23	2	67			
Cymbidium culture. Development in (N.S.W.)	24	2	72			
Cymbidium culture to beat sunburn	25	1	13			
Cymbidium Dorchester 'Jeanette'	24	4	198			
Cymbidium Etta Barlow 'Dover Heights'	25	4	178			
Cymbidium, General Culture of (U.S.A.)	23	2	89			
Cymbidium, lowianum 'concolor'	23	3	123			
Cymbidium, Orchids—My Experience in Growing	25	3	135			
Cymbidium, Show Flowers—Old and New	23	1	20			
Cymbidium, The Vandaceous	23	2	79			
Cymbidiums and Colour	25	4	172			
Cymbidiums—Feeding and Flowering	24	3	120			
Cymbidiums for export	23	2	71			
Cymbidiums—Beds or Pots (Victoria)	24	3	132			
Cymbidiums in late Summer, The significance of Dividing	25	2	61			
Cymbidiums in Sydney 1958	24	1	44			
Cymbidiums need Feeding, Why	25	2	76			
Cymbidiums, When you feed your	25	1	15			
Cypripedium Culture	23	1	32			
Cypripediums in and around Sydney	25	1	17			
Dart, Richard	25	3	122			
Demonstration of Judging (U.S.A.)	24	4	187			
Dendrobium Culture—correspondence	25	2	79			
Dendrobium densiflorum	25	4	170			
Dendrobium fusiforme	25	1	30			
Dendrobium gouldii—hybrids from	23	2	85			
Dendrobium jamesianum	25	4	170			
Dendrobium nobile	24	4	174			
Dendrobium phalaenopsis, in hybridisation	23	2	80			
Dendrobium pierardii	25	1	18			
Dendrobium speciosum	25	3	127			
Dendrobium stratiotes, hybrids from	23	2	83			
Dendrobium superbum	25	4	170			
Dendrobium taurinum, hybrids from	23	2	84-85			
Dendrobium undulatum	23	2	85			
Dendrobium veratrifolium	23	2	83-85	25	1	33
Dendrobium Winifred Fortescue 'Wondabah'	25	4	178			
Dendrobiums, Desirable Cane Types (or Hardwood)	25	3	116			
Dendrobiums, Hawaiian Hybrids	23	2	80			
Diacrium bicornutum	24	4	173			
Diploids or Polyploids?	25	3	129			
Distant Hills	23	3	137			
East Hills District Horticultural and Orchid Society Committee	23	1	21	24	3	146
	25	4	199			
Eastern Suburb Orchid Society	23	4	175			
Eastwood and District Orchid Circle	24	3	146	24	4	199
	25	4	200			
Editorials	25	1	12	25	2	60
Epidendrum Goodale Moir	25	4	178			
Epiphytes have come into their own	25	1	19			
Exhibiting at Shows	24	4	174			
Export Cymbidium Flowers (lists of varieties)	23	2	72-74			
Exports Booming	25	2	77			
Exports of Orchids from Australia	25	4	176			
Fahey, W.—the Late	23	3	124			
Foliage Plants—General Hints on Bush and Glasshouse culture	25	2	81			
Gilbert, P.—the Late	25	3	122			
Glasshouse—Orchids in a miniature	23	1	30			
Glasshouse, Construction of a miniature	23	1	30			
History of Orchids in Western Australia	25	4	174			
Housing (Southern Queensland)	25	1	34			
Hybridisation and intense colours	23	4	187			
Hybridisation, Effect of	23	1	24			
Hybrids in <i>Oncidiums</i>	23	4	176-181			
Hybrids, Orchid	23	1	22			

	Vol.	No.	Page	Vol.	No.	Page
Illawarra District Orchid Society (committee 23 1 19)	25	4	201			
Incident—A Strange	25	1	14			
In Memoriam	24	3	122			
Ionopsis utricularioides	24	4	170			
Ipswich Orchid Society						
	25	1	38			
Judges and Judging	23	4	194	24	1	29
Judging Cymbidiums, On	25	3	113			
Ku-ring-gai Orchid Society	23	1	37	23	2	95
	23	3	181	24	1	23
	25	4	198			
Laelia lundii 'regnellii'	25	4	170			
Life Member of Queensland Orchid Society	23	1	127			
Lycaste Sunrise x Balliae 'Greycliffe'	25	4	183			
Macleay River Orchid Society—1st Annual Show	25	4	198			
Manning River Orchid Society	23	1	37	23	2	95
	23	3	127	24	1	44
	25	1	38	25	2	85
	25	3	140	25	4	199
Marketing Facts, Some Cymbidium	24	3	131			
Maxillaria sanderiana	25	4	170			
Melanism in our Orchids	23	4	187			
Miltonia, Hybridising, Characteristics of	23	3	143-144			
Miltonia spectabilis 'Moreliana'	25	4	170			
Miscellaneous Orchids for Pleasure (N.S.W.)	24	2	66			
My Pauwelsii	23	1	12	23	2	64
	23	3	116	24	1	12
	24	2	64			
Nematode Disease—Root Lesion	25	3	127			
Newcastle Orchid Society	23	4	198			
New Zealand Orchid Enthusiasts	23	2	75			
Nomenclature as they Apply to Orchids, Code of	24	2	91			
Nomenclature of Orchids, Rules of	23	1	23			
Non-Orchidaceous Epiphytes	25	1	37			
North Shore Orchid Society	23	1	27	24	1	37
	24	3	147	24	4	199
	25	4	197			
Notes from Affiliated Societies	24	4	199			
Odontoglossum grande	25	1	16			
Odontoglossum Tromar G 'Silver Lining'	23	1	21			
Oncidium kramerianum	25	4	183			
Oncidium papilio	25	4	183			
Oncidium sarcodes	25	4	170			
Oncidiums and their Allies—Part I.	23	3	141			
Oncidiums and their Allies—Part II.	23	4	176			
Orchid Atmospherics	25	1	32			
Orchid Breeder gave Interesting Address to Coffs Harbour Orchid Club	24	4	185			
Orchid Culture in South Australia	24	2	75			
Orchid Culture in Spring	23	3	131			
Orchid Culture in Summer (N.S.W.)	23	4	182			
Orchid Culture in Summer (Victoria)	23	4	189			
Orchid Culture in Western Australia.	24	1	24			
Orchid Display, An Effective	25	2	80			
Orchid Exports Booming	25	2	77			
Orchid Handbook	23	1	25			
Orchid Hybrids	23	1	22			
Orchid Hybrids—New	23	1	39	23	2	96
	23	3	146	23	4	200
	25	1	40-42	25	2	141-146
Orchid Seed Harvesting	25	3	121			
Orchid Society of New South Wales Ltd.	23	3	118			
Orchid Society of New South Wales Ltd. (Committee)	23	4	186			
Orchid Society of New South Wales Ltd.	24	2	97			
Orchid Society of New South Wales (By Laws)	24	2	75	24	2	71
	24	2	80	24	3	120
(Orchid Festival)	23	4	170	24	4	178
	25	4	186			
(Winter Show)	23	3	128			
Orchid Society of New South Wales Ltd. (Winter Show)	24	2	65	25	3	138
Orchid Society of Southern California Review	25	1	13			
Orchid Society of Western Australia	23	4	199	25	4	196
Orchid Society of Western Australia Show results	24	4	197	25	3	140
Orchid, What is an?	23	3	125			
Orchids, anyone?	25	1	35			

	Vol.	No.	Page	Vol.	No.	Page
Orchids—A Selection of 50 species—Part I.	25	4	169			
Orchids in a Miniature Glasshouse	23	1	30			
Orchids on the Barrington	25	4	177			
Orchids with Terete Leaves	25	4	175			
Organic Compost for Cymbidiums, An	25	4	184			
Over the Fence	24	3	134	24	4	192
Parramatta Orchid Society	23	1	34	23	2	95
	23	3	136	23	4	197
	24	2	84	24	3	145
	24	4	172	24	4	193
Pendulous Orchids	24	2	89			
Persson, Andrew	25	3	122			
Personalia (Judges of O.S. of N.S.W. Ltd.)	24	3	143			
Pests and their Control	24	1	38			
Phalaenopsis (culture Southern Queensland)	24	4	176			
Phalaenopsis, Culture of	23	1	26			
Plastic Pots	24	4	189			
Porter, A. B.—An Appreciation	23	1	14			
Position is Everything	25	4	171			
Queensland Orchid Society	23	2	94	24	2	81
	25	1	38			
Queensland Orchid Society Shows	24	1	40	24	4	197
Registration of Varietal Names	25	3	118			
Rodriguezia secunda	23	3	142			
Roof for a Bush House	25	3	119			
Root Lesion—Nematode Disease	25	3	127			
Rothwell, W.—in memorium	25	1	30	25	1	38
Round the World Ticket and an Eye for Orchids	25	3	130			
St. George Orchid Society	23	1	27	23	2	94
	23	3	134	23	4	200
	24	1	43	24	4	196
	25	2	84			
Sanders Hybrid List—New	25	1	29			
Sarcochilus of North Queensland	25	4	187			
Shoalhaven Orchid Society	23	3	145	23	4	193
	24	2	97			
Shows and things	24	4	194			
Shows—annual	23	2	95			
Siam Society of Plant Culture—Congratulations from the	25	4	174			
Silver Medals	23	2	78			
Singapore Visitor	23	3	127			
Snails and Slugs	25	2	70			
Sobralias	23	3	137			
Sophronitis coccinea and its Allies	24	4	185			
Some Conflicting Notions Concerning Orchid Culture	24	4	171			
Some Cymbidium Marketing Facts	24	3	131			
Some Easily grown Coelogynes (N.S.W.)	24	3	132			
Specie and species	24	4	174			
Starting a Collection (S.E. Queensland)	25	1	31			
Sterilising Orchid Seeds for Planting	24	2	86			
Sutherland Orchid Society	23	3	136	25	4	200
Sydney Orchid Society	25	4	199			
Sydney's Tribute to Queen Elizabeth, The Queen Mother	23	2	68			
These I Remember	24	4	177			
Townsville Orchid Society	24	2	90			
Trichopilias	23	3	142			
Vanda coerulea and some of its Hybrids	24	3	141			
Vanda sanderiana 'Molly Mills'	23	3	130			
Vandas are Hard to Grow	25	2	68			
Variance of Photographs	24	2	90			
Victorian Orchid Club—Shows	23	3	135	23	4	185
	24	2	81	24	4	195
	25	3	139	25	4	195
Warringah Orchid Society	23	4	196	24	4	199
	25	4	201			
Watering and Conditions of Orchids, The Care of (S.E. Qld.)	24	2	76			
Western Suburbs Orchid Society	25	4	199			
What is New Under the Sun	24	3	119	24	4	175
When you feed your Cymbidiums	25	1	15			
Winter care for Orchids in Southern Queensland	24	2	85			
Winter culture in N.S.W.	24	2	78			
Winter culture in Tasmania	24	2	95			
World Orchid Conference, 3rd	25	1	18	25	3	112
Worth Observing	25	1	28			

INDEX TO ILLUSTRATIONS

	Vol.	No.	Page	Vol.	No.	Page
Angraecum sesquipedale	25	1	Cover			
Bulbophyllum barbigerrum	25	1	26			
Bulbophyllum godeffianum	25	3	124			
Bulbophyllum grandiflorum	25	3	124			
Bulbophyllum macranthum	25	2	73			
Bulbophyllum species	25	3	124			
Bouquet for Queen Elizabeth, The Queen Mother (colour)	23	2	69			
Brasso—Cattleya (Deesse x Memoria Rosemary)						
'Wondabah' H.C.C.	23	4	173			
Cattleya Bob Betts 'Bexley' H.C.C.	23	4	173			
Cattleya bowringiana	25	1	18			
Cattleya Galliard 'Rapallo'	24	2	87			
Cattleya General Patton 'Balmoral' H.C.C.	23	1	192			
Cattleya loddigesii	25	1	24			
Cattleya culture	23	1	35			
Coelogyne barbata	24	3	140			
Coelogyne cristata	24	2	69			
Coelogyne mooreana	23	2	70			
Coelogyne pandurata	25	3	Cover			
Cymbidium Anita 'Diane'	25	4	180			
Cymbidium Babylon 'Castle Hill' x Rosalita 'Burgundy'	25	4	180			
Cymbidium Babylon 'Castle Hill' x 'Rosalita'	25	3	125			
Cymbidium Balkis 'Luath'	24	4	181			
Cymbidium Balkis x Shina Black	25	3	125			
Cymbidium Baltic A.M. R.H.S.	24	1	Cover			
Cymbidium Brissie 'Evelyn'	23	3	122			
Cymbidium Charmant 'Kurnbrook Glory'	24	1	36			
Cymbidium Dorama 'Fairfield'	23	1	18			
Cymbidium Dorchester 'Jeanette' F.C.C.	24	1	Cover	24	1	18
	25	4	179			
Cymbidium Etta Barlow 'Dover Heights'	25	4	181			
Cymbidium Etta Barlow 'Enchantress'	24	4	184			
Cymbidium Fascination 'Regal'	23	1	36			
Cymbidium Girrahween 'Enid'	23	3	122			
Cymbidium Girrahween 'Gloria' (colour)	23	1	17			
Cymbidium Hubert Cambourn 'Lois'	23	1	18			
Cymbidium Independence Day 'Beryl Jean'	24	1	35			
Cymbidium Jason Marblethorpe	22	1	18			
Cymbidium Joan Luth 'Joy' H.C.C.	24	1	36			
Cymbidium Judy	24	3	139			
Cymbidium Mayfair 'Stonehurst'	23	2	70			
Cymbidium Miretta 'Matchless' A.D. see Baltic						
Cymbidium Prince Charles	25	2	71			
Cymbidium Prince Charles 'Pinnacle'	23	2	70			
Cymbidium Rio Rita 'Radiance' x Clarissa	25	3	125			
Cymbidium Robin Redbreast 'Lilyvon' A.D.	24	1	36			
Cymbidium Sante Fe	25	2	71			
Cymbidium Sirius 'Golden Dawn'	24	3	139			
Cymbidium Starlight 'Crown' A.M.	23	3	191			
Cymbidium York 'Lady Slim'	24	1	35			
Cymbidium York 'Margaret Olive' H.C.C.	23	3	19	24	1	35
Cymbidium The Vandaceous	23	2	88			
Cymbidiums, When and How to Divide	23	2	87-88			
Cypripedium Balaclava	25	3	123			
Cypripedium Balagrosa x Thembelisa	25	3	123			
Cypripedium Madge Le Gros 'Windsor' H.C.C.	23	4	192			
Cypripedium Paddy Joe 'Belvedere'	23	1	35			
Cypripedium Tearlath	25	3	123			
Dendrobium Amy	24	2	69			
Dendrobium Claire Nishimura	24	2	69			
Dendrobium Model 'June'	23	1	36			
Dendrobium Mousmee	23	3	174			
Dendrobium speciosum	25	3	126			
Dendrobium thyrsoflorum	23	4	174	25	2	Cover
Dendrobium Thomas Warne	25	3	126			
Dendrobium Winifred Fortesque 'Wondabah'	25	4	181			
District Exhibits:—						
Eastwood and District Orchid Circle (1958)	23	4	174			
Mosman Home Gardeners and Orchid Society (1958)	23	4	Cover			
North Shore Orchid Society (1958)	23	4	173			
St. George Orchid Society (1958)	23	4	191			
(1960)	25	4	Cover			
Western Suburbs (1958)	23	4	192			
General view from the stage of 1959 Festival at the Sydney						
Town Hall	24	4	182-183			

	Vol.	No.	Page	Vol.	No.	Page
Epicattleya Elena Castaneda	25	1	24			
Epidendrum Goodale Moir	25	4	181			
Epidendrum nemorale	25	1	26			
Epidendrum parkinsonianum	24	2	88			
Epiphytes	25	2	73			
Grammatophyllum papuanum	25	1	25			
Illustration showing a Young Seedling Sprouting	24	4	184			
Laelia—Cattleya Hertha A.M.	23	3	121			
Cattleya Hertha 'Rosemont' A.M.	24	2	87			
Cattleya Sari	23	3	121			
Cattleya Sennora Lustre	23	3	121			
Lycaste (Sunrise x Bailliae) 'Greycliffe'	25	4	180			
Macodes pulcherrima	25	2	74			
Miltonia 'Atina' 'Elvira'	23	2	64			
Miltonia Lady Veitch 'Wondabah'	23	2	69			
Miltonia vexillaria 'Lyoth' (colour)	24	2	87			
Odontioda Margia	24	2	70			
Odontoglossum cervantesii	25	1	23			
Odontoglossum pendulum	25	1	23			
Odontoglossum Perryanum	24	2	70			
Odontoglossum Tromar 'Silver Lining'	23	1	Cover			
Odontonia Salam	24	2	70			
Oncidium crispum	24	3	122			
Oncidium forbesii	24	3	121			
Oncidium gardneri	24	3	121			
Oncidium jonesianum	24	2	88			
Oncidium kramerianum	25	4	182			
Oncidium marshallianum	24	3	140			
Oncidium Nona	24	3	122			
Oncidium papilio	25	4	182			
Oncidium sphacelatum	23	3	140			
Oncidium varicosum	23	3	139			
Oncidium variegata type	23	3	140			
Oncidium zebrinum	25	2	74			
Phalaenopsis, A Phantasy with	24	2	Cover			
Phalaenopsis, Reve Rose 'Rapallo'	23	1	35			
Phalaenopsis, Sarchesis 'Balmoral'	24	1	18			
Sarcochilus hartmannii	25	4	182			
Sobralia macrantha	23	3	139			
Sophronitis coccinea	24	4	184			
Snails and Slugs	25	2	72			
Sydney Town Hall Stage (1958)	24	1	17			
Sydney's Tribute to Queen Elizabeth, The Queen Mother	23	2	Cover			
Vanda coerulea	24	3	Cover			
Vanda Onomea	25	2	71			
Vanda sanderiana 'Molly Mills'	23	3	Cover			
Vanda Tan Lou Tek	25	3	123			
Vuylstekeara Estelle Jewel	24	2	70			
Zygopetalum mackayii	23	1	35			

... Orchids ...

CATTLEYSAS

L. C. Beaufighter x L. C. Isobel.
C. Bow Bells x L. C. Beaufighter.
These are good sturdy plants in 4" pots, which are expected to give good whites and creams.

£4 per plant

B. L. C. Edwin Fischer. Variable shades of pale yellow and mottled mauve.
B. L. C. The Friar x L. C. Monora. Large winter flowering, mauve.
C. Margaret Hess. Large spring flowers, white with splash of mauve in labellum.
L. C. First Nighter. Good quality winter flowering, deep mauve.
L. C. Clifton Down. Good winter flowering, lavender.
L. C. Canhamiana. For spring and early flowering, mauves, large flowers.
These are all flowering size plants.

£4 per plant

VANDAS.

Have just acquired a large selection of strap leaf and semi-terete Vandas. From small to medium size plants in 27 varieties.

Space will not permit to advertise full lists, so please send for lists.

This is one of the best collections ever been offered for sale.

Prices ranging from £2 to £7/10/- per plant.

MILTONIAS. Popular French hybrids @ £4 and £5 per plant.



Cypripedium St. Albans
Summer flowering plants £4 ea.

N.S.W. Agent for
"WALDOR" GREENHOUSES

Some of these houses are in use at the Nursery, and inspection is cordially invited.

Frank Slattery's

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(Off Stoney Creek Rd., opp. Bexley Park)

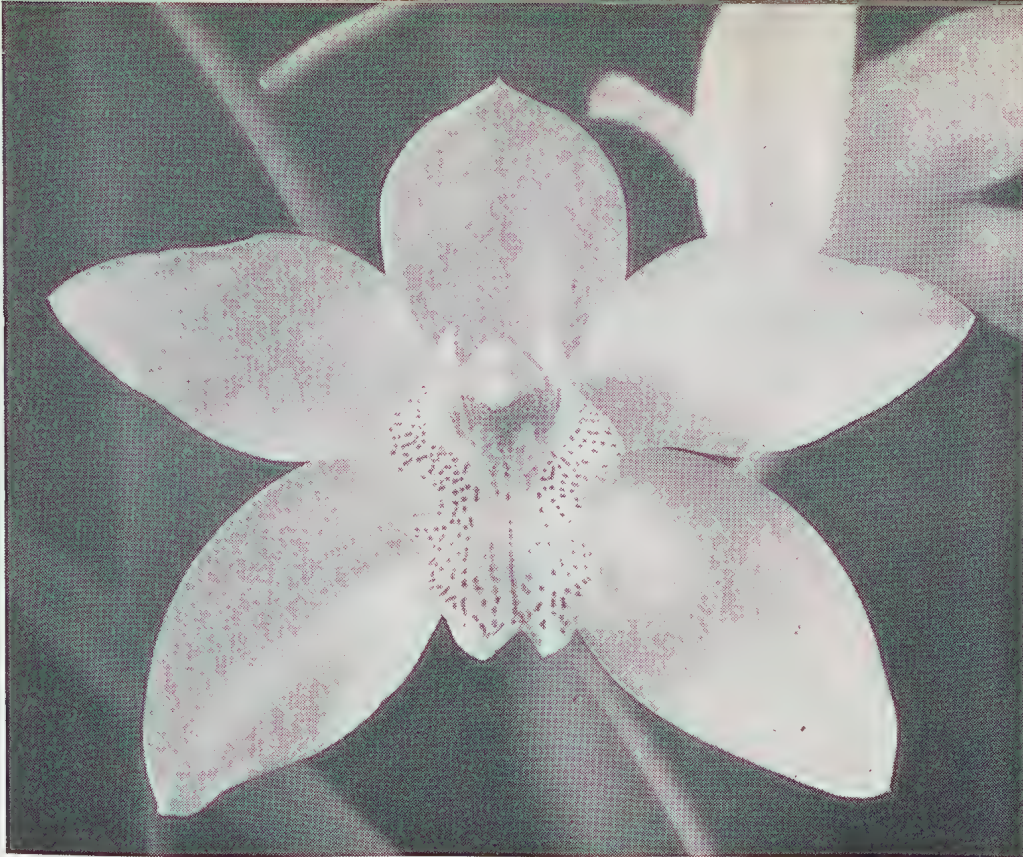
Phone
LY7985



Portion of the thousands of plants growing at the Dos Pueblos Orchid Company's nursery at Dee Why West, to provide blooms for export to America.

The nursery at South Creek Rd. is open for inspection every day of the week—from 9 a.m. to 5 p.m. Come and see the magnificent Cymbidium Seedlings that are at present available.

Seedlings from 50/- to 70/-; 20% discount of all seedling orders exceeding £50. Information freely available on our revolutionary methods of Cymbidium culture—we will also gladly answer any queries pertaining to Cymbidiums and their culture.



dos pueblos presents *Samarkand*

Heathrow 'Mary Bea' x Alexanderi 'Westonbirt' FCC/RHS

This is typical of the progeny resulting from Dos Pueblos crosses . . . many seedlings of which are now available in Australia for the first time.

One of the seedlings we have at present—D.P.4042 Heathrow 'Mary Bea' (2n) x Rosanna 'Pinkie' FCC/RHS (4n)—is expected to be even better than "Samarkand". Rosanna 'Pinkie', of course, was evolved from famous Alexanderi 'Westonbirt' and it has here been used with one of the most highly regarded greens. We expect to see many yellow to light green tints along with the more usual blush shades in this cross.

These seedlings are now about 10-12 inches high . . . Price 70/- each.



YORK MEREDITH
Managing Director

Orchid Company
(AUST.) PTY LTD.

SOUTH CREEK ROAD, DEE WHY WEST • New Telephone Number—XW6333

Earn Sterling and Dollars
by Growing
ORCHIDS FOR EXPORT

ROY DEANE

will answer your
questions about flowers
for the Export Market

Grow World Famous
Greenacres Orchids

To make a profitable income from export quality Cymbidiums you must catch the overseas market early. Do this with quality blooms and income is assured.



SPECIAL OFFER

For £50 you can get 20 small plants of Greenacres Orchids which will give you

BALANCED FLOWERING FROM EARLY
JUNE THROUGH TO OCTOBER

Plants have a well-established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally out of his great experience as a grower and exporter of Orchids to England, United States and other countries all over the world. Call and inspect . . . special quotations for individual requirements.

"GREENACRES ORCHID FARM"

Wholesale and Retail Supplies

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND

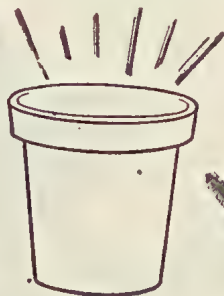


We have a limited number of FLOWERED Cattleyas, FLOWERED Cypripediums and FLOWERED Cymbidiums for sale and are able to despatch to Australia throughout our winter, due to our proximity to London Airport.

We do not at present issue a catalogue, but lists of plants will be willingly sent to enquirers. Please state in what genera interested.

We do not sell community pots or small plants.

Yours every time
a clean compost
for potting Orchids



How Carbam Works

—kill weed seeds in potting
soil with **CARBAM!**

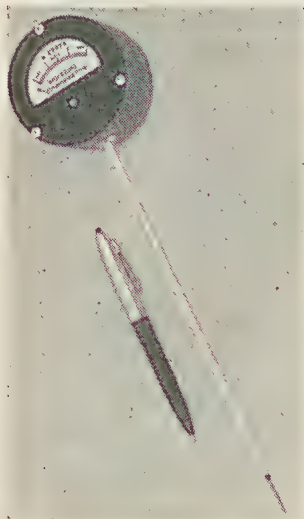
Use George C. Warner's CARBAM to sterilize potting mixtures for easier, more troublefree Orchid growing. Carbam kills Onion Weed, Fungi and Nematodes, too. Soil can be used after only two weeks.

George C. Warner's Carbam is a soil-fumigant. It converts to a gas in the soil that kills • Weed Seeds in Potting Soil and composts, Onion Weed, Oxalis, etc. • Fungi—Damp-off, Collar Rot, etc. • Namatodes—insects that cause Root Gall • Insects—Wireworm, Black Beetle, etc. Full directions with bottle.

16 oz. bottle 16/-. From all Stores

ANOTHER
GEORGE
C.
WARNER
PRODUCT





MOISTURE COMPARATOR

(INDICATOR)

Instantaneous

—Unbelievable Response.

Accurate

In Wonderbark, Osmunda, All Soils.

By merely pushing the pointed probe into the soil you have the moisture reading at the various depths immediately.

Used by commercial men and farmers as well as the home grower to determine water need.

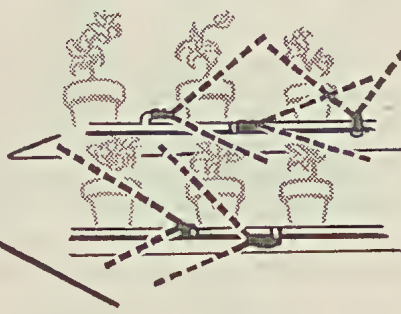
PRICE: £6 12. 6.

Rod McLellan Co. 1457 EL CAMINO REAL
SOUTH SAN FRANCISCO, CALIF., U.S.A.



Available in Australia for the first time
the famous American "**MONARCH**"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 25/- posted.



AT

FRANK SLATTERY'S ORCHID NURSERY. 12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes from about 10" to full flowering size, at prices ranging from 30/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown Odontiodas, flowering size.

Odontioda ARIITEA, for strong dark reds.

Odontioda BALEK, likely to vary from brick red to light red and orange.

Odontioda SALAM, flowering size seedlings, for very large flowers, pure red or pastel, sometimes purple and white lip.

Miltonia seedlings, flowering size, many fine crosses to give the darkest clear reds that are ever likely to be achieved.

Plants of Lycaste Brugense, F.C.C., R.H.S. x Macrobulbum Youngii, A.M., R.H.S.

Plants of Lycaste Sunrise x Bailliae, Lycaste Brugense, and Lycaste Cruenta.

I have a very large stock of Cattleya seedlings in all sizes for you to select from. These range in price from 25/- for small seedlings, and from 45/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

John Bisset

For Orchids, Bush-house and Glass-house plants. We have one of the finest collections of foliage and indoor plants in Australia. Inspection is cordially invited at both our nurseries.

JOHN BISSET

Show Nursery:

8 Brisbane Avenue, East Lindfield, N.S.W.
Phone: JM1906
Sundays

General Nursery:

48 Wareemba St., Abbotsford, N.S.W.
Phone: WF8124
Week Days.

Publisher and Distributor of:

CYMBIDIUM CULTURE & VIRUS DISEASES, £1/1/-. 1/- Postage
"ORCHID HANDBOOK" BY N.S.W. ORCHID SOCIETY, 8/6.
CULTURE & AWARDS OF ALL GENERA. 6d. postage.

The World's Most Eminent and Successful Breeder's of Outstanding Hybrids

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application. . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids.

*Six superbly sturdy
seedlings, 4
sturdy bulbs from 2 inch
pots, to flower
after
two years:*

Cattleya Annette x L. C. Cynthia alba Model.
Cattleya Ballantineana x B. C. Hartland.
Cattleya Aurea x B. L. C. Cadmium.
L. C. Clothilde x B. L. C. Nugget.
L. C. Nina splashed x C. Hardyano—Warnerii.
B. L. C. Hartfield extra dark x Cattleya Horatius.
Six Fine Young Plants as listed, sent by Air Parcel Mail,
all charges paid, and insured—for—Twelve pounds ten shillings sterling.

Illustrated Catalogue and Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

First Release for 1958 of Young Champions

LOT "A": AWARD AND SHOW TYPE CYMBIDIUMS

ARABELLA, MAGNIFICENT,
H.C., A.M.
ARABELLA, WAVERLEY, H.C.
(twice) A.M.
BALKIS LUATH, H.C., A.M.
(1957 GRAND CHAMPION)
CARISBROOK, PLUM (Early).
CASSANDRA, EVADNE, A.M.
CASSANDRA, TOXTETH, A.M.
CELIA, TANANDRA (Prize
Green—Early).
CERES, F. J. HANBURY, A.D.
(twice).
CERES, WESTMINSTER
(special pink).
CHARM, ELEGANCE, A.M.,
H.C. (Early).
CORDELIA KURINGAI, A.D.
(Colour Champion).
CYGNUS, JANET (large, cin-
namon).
ESMERELDA (Prize Green).

GIRRAHWEEN, GLORIA, A.M.
GLORIANA, TUDOR ROSE,
(The Champion Pastel Pink).
HISTORIAN, LINDFIELD,
H.C.
INCA (White Pink. Excellent
Shape and Texture).
JANETTE, GOLDEN CROWN,
A.D.
JOYANCE CINNAMON, H.C.
JOY SANDER, RUTH, H.C.
LOUIS SANDER, GIRRAH-
WEEN (A Champion Pastel
Pin).
LUCY, CRUIKSHANKS (Early
White Pink).
MIDLOTHIAN, GREEN-
SLEEVES, H.C.
MIRANDA, MAISIE, A.M.
PERI. Good Big. Yellow/Lime
Green.
PLOVER, No. 1. (Excellent

Green).
PRESIDENT WILSON, HAB-
ERFIELD.
PRINCESS ELIZABETH, THE
GIANT.
PRINCESS MARGARET, HAB-
ERFIELD.
PRIAM ADA MEECH, H.C.
(Twice).
PROFUSION VIOLACIA. (Pink
Champion).
SANDPIPER, PENGILLY.
(Lovely Large White, Good
Shape).
SUSSEX, LAELIA SASSO, H.C.
(twice) A.D., A.M.
SWALLOW, CONQUEST, H.C.
(twice).
SWALLOW, DAFFODIL, H.C.
(twice), A.M.
VERULAM No. 1. (Early Sea-
son Champion).

For any 6 of the above 36 plants, £15; for any 12 of the 36 plants, £22; for the whole 36 plants as listed, £60. All plants are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

LOT "B": EXPORT AND WESTONBIRT VARIETIES

Six flowering size green plants (leading green bulbs with leads), all different varieties, £15; per dozen, £25.

Haberfield Orchid Nursery

*The Oldest Established Commercial Cymbidium
Specialists in Australia.*

37 Dobroyd Parade
Haberfield (Sydney)
N.S.W., Australia

C. W. BUSHELL, Jr. UA5895

*Haberfield Orchid Nursery,
Box 14, P.O.,
Haberfield, N.S.W.*

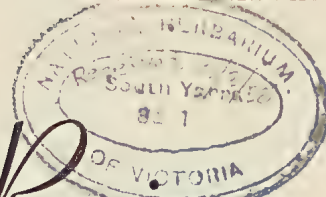
*Please find enclosed £.....for
.....plants in Lot....., which
please forward as soon as possible.*

NAME

ADDRESS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra per dozen plants to points in New Zealand.

Australian Orchid Review



VOLUME 23

MARCH, 1958

No. 1

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

A. B. Porter, An Appreciation	14
Around Australia	34
Awards, N.S.W. O.S. Ltd.	21
Climate and Orchid Culture— <i>J. N. Rentoul</i>	15
Cymbidium Culture— <i>Dos Pueblos Orchid Co.</i>	28
Cymbidium Show Flowers, Old and New— <i>A. R. Begg</i>	20
Cypripediums— <i>R. E. Trenerry</i>	32
Never Re-pot a Cattleya— <i>J. Shaw</i>	33
New Orchid Hybrids	39
News and Notes (Front Cover 21)	14, 19, 21, 25, 27, 31
Orchids in a Miniature Glass House— <i>B. M. Cardwell</i>	30
Orchid Hybrids— <i>Dr. A. W. Hartwig</i>	22
Phalaenopses, Culture of— <i>Wm. Kirch</i>	26
Pauwelsii, My	12

ILLUSTRATIONS

Cattleya Culture	35
Cymbidium Dorama 'Fairfield'	18
Cymbidium Fascination 'Regal'	36
Cymbidium Girrahween 'Gloria' (colour)	17
Cymbidium Hubert Cambourn 'Lois'	18
Cymbidium Jason 'Marblethorpe'	18
Cypripedium Paddy Joe 'Belvedere'	35
Dendrobium Model 'June'	36
Phalaenopsis Reve Rose 'Rapallo'	36
Zygopetalum Mackayi	35

Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA:

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

Mr. N. Christoph
18 Clinton Ave.
Myrtle Bank

WESTERN AUSTRALIA:

A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising, neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

My Pauwelsii

• Australia's orchid blooms are to be found in florists' shops in many countries throughout the world and, in trying to explain a fragrance not usually associated with members of my clan, I shall have to relate some astounding experiences that befell my master and the reasons for the Sydney Christmas spending orgy which eventuated during one of the severest drought periods ever experienced in N.S.W.

Millions of pounds were spent in the record note issue for this part of the world. A bottle of perfume was for sale at one city store for £104, and although water was scarce there did not seem to be a plant worthy of such consideration—a year or two ago maybe!!

Water restrictions banning the use of garden hoses and sprinklers resulted in many severe prosecutions; the lowly cistern was a headline newspaper feature wherein advice, to admit one house brick to the dingy depths of this precious well and so save one gallon of water, where two were usually required, was to be heeded to such an extent that a court could convict an offender and confine him to the penitentiary where he could legally drag the chain to his heart's content.

A "good neighbour relations policy" had been adopted to such an extent that my master was at a loss to ascertain the reasons for the "Good Mornings" on every side of the street. The first real shock was when that fastidious vegetarian, who resides next door, removed her choko vine from shading our benches in the bush house. A formal polite request had previously been rejected, accompanied by a facial expression somewhat resembling Miss Myrna Loy of Hollywood film star fame.

Being unprepared for this unforeseen gesture of goodwill, my confrères were badly scorched by the sudden exposure to the strong sunlight together with temperatures around the 100 degree mark—one day excelling itself in climbing to 108 degrees in the shade.

The receipt of a Christmas card, on December 24th, baffled my benefactor, created a hurried search for an unused card and caused domestic panic because of the poverty buying of "just enough to go 'round". No stores or shops were open (Sydney has a very strict slogan—"Shops are opened and closed by Day"), and as a last resort a stamp was steamed from a used envelope, to disguise the return of the

greeting, which was placed in Turned-up Nose's mail box after darkness had set in.

The position was the same in most Sydney areas; there seemed to be friendship in the air, as though Australia had just accomplished the almost impossible feat of regaining the coveted "Ashes" from England. It is so long that we have held the Davis Cup that our feelings towards the usual American Challenge could not be likened to our water restrictions unless some tennis critic from the U.S.A. was crying on our shoulder.

Christmas Day with a temperature of 102 degrees was a real shocker; half the neighbourhood came in for a "quick one" and departed only after leaving "just a little thought for New Year". Ties, cigarettes, chocolates and bath salts were all arrayed on the kitchen table. Now the friendly atmosphere had reached our domicile and the mystery deepened for my master and his wife, who were completely astounded.

Perhaps I should tell him the real story about the happenings at 11 p.m. each night. Turned-up Nose sets her alarm clock for 10.30 p.m., arises, sneaks out the back door, furtively takes her hose from the tool shed and very quietly, though thoroughly, drenches her garden. The resultant run-off, which meanders beneath the dividing fence, gradually seeps into our bush house. The removal of the choko vine was to speed the drying process lest it be observed from our domain.

Acts such as this, and the spending spree, now seemed to be the direct result of the Sydney Water Board's restrictions, and the gifts merely a form of bribery to prevent a possible report to the inspectors.

Worse was to come—the bath salts, which had an aroma from peppermint to port wine, were finally used by my master's wife, and the expected fragrance to our blooms the result of an honest attempt to save water. As Saturday night is bath night, our Sunday drenching reminds me of a weekly line-up of a large English family with Pater armed with a tablespoon containing senna leaves or castor oil, depending on the age group of the minors, and naturally without any need to think of any restrictions like those with which we have had to contend.

We are so thirsty that I do not have any choice in the pH or otherwise of our life-giving fluid and I do not have the heart to tell my master that bath salts, bribery and burn are all the result of Turned-up Nose illegally using water.

This explanation of the fragrance that may cling to our blooms should be framed and carried by all young ladies lest an intending prospect for the down payment on a television receiver, washing machine, car, etc., bend his head to examine the orchid worn on the lady's shoulder — and finally reject the proffered caress because of the port wine aroma and the thought of a wife sneaking out for "one on the quiet".

As the drought continues, Registered Nurseries are permitted to use water only between the hours of 3 p.m. and 7 p.m. daily (large families were not exempt even though each child was registered before reaching nursery age), and as theorists advise, with modern culture, to dry plants by evening, my master paid a visit to Frank Slattery's Quarantine House at his Nursery. (Orchid enthusiasts will no doubt be glad to know that Frank is well on the way to good health again after a serious operation.) The plants looked much more robust than when watered each morning, especially the *Miltonias* and *Odontoglossums*, which simply revel in their evening swim during this very hot and dry period.

At this juncture may I digress and try to be of some aid to Persson's Regal Castle (June A.O.R. request).

I have watched my master cultivate these lovely *Odontoglossums* for some considerable time and, although I think he cares more for them rather than for our genus, I must admit that as they do not reside within our open air lath house I am not unduly worried as to his "other interests" as is common with most men.

They reside in much smaller pots, so the present water restrictions would infinitely prove less hazardous whilst carrying their pail of water than sneaking a hose to give us a drink.

Their domain is an ordinary glass house, ashes on the floor to hold moisture, brick walls up to 4ft., benches 3ft. from the ashes and a very high roof to ensure plenty of air which is too moisture laden for my own liking. Fresh air enters the ventilators, set just above the ashes, and carries the moisture to the top ventilators, thus permitting a continual moist atmosphere.

Lattice laths, suspended twelve inches from the external glass roof, keep the temperature down 15 degrees to 20 degrees during hot spells. The plants are housed in very small pots in a mixture of one-third each of fibre, oak leaves and Sphagnum moss. Broken crocks of large sandstone particles mixed together with the compost allow the plants to be watered nearly every day in summer, together with a misting again each afternoon. As the summer temperatures are very high in Sydney, the winter heat is kept at 55 degrees so as to keep the *difference* in the seasons as reasonable as possible and with this heat in winter the watering programme does not differ greatly from the summer ritual except that on bleak wintry days no water would be required. As with our family, these plants are fed with any good liquid fertiliser once every two weeks, and as the plants are watered nearly every day the compost is kept free of any salts forming from the residue of the feeding programme.

Shade from our house completely takes away the sunlight from their tent at noon, although 50 per cent is obtainable between the removable 1½ in. x ¼ in. lattice laths during the pre-lunch period.

Noticing the plants in Mr. Slattery's house, which can only be watered after 3 p.m. each day, reminded me to aid, if I can, Mr. Persson's Regal Castle. These plants have to be watered every evening without any knowledge of Mother Nature's mood and the weather prediction for the next day — the prediction is usually wrong, anyway. This season has ranged between 40 degrees and 108 degrees, so that if these orchids are known as cool growing orchids just what do warm growing orchids require?

Perhaps as Mr. Jim Rentoul suggests (see this issue) the culture of orchids is different in other areas in Australia, though after having seen the last few Victorian Orchid Shows I am convinced that growers in that State could most certainly use many of this State's cultural hints. Growers in N.S.W. would not be as careful as they are with their correct flowering of our genus if the exporters were not so particular as to the tints required for unspotted and unblemished blooms for the American market. Exporters who used to send "anything" have been financially ruined, especially now that a Co-operative Company has been formed in N.S.W.

As it is imperative that *Cymbidiums* must have plenty of *fresh* air for better culture, it should be possible for the connoisseur to emu-

late the N.S.W. culture and grow us outside in a lath house for seven or eight months of the year, using the same feeding programme, *before* we are then wintered and flowered in a glass house.

It is for a year now that my master has endeavoured to portray an all-Australian picture of the various cultures of orchids. He cannot do so as yet because of the lack of co-operation by the various associate editors from other States. A perusal of the articles contained in

this Review during the past year would perhaps remind enthusiasts to make sure that their own editor gets busy and puts their State on the map so that N.S.W. growers can make up their minds as to where they may hibernate during our water restriction periods, and also provide a possible thought for a future permanent domicile away from all the Turned-up Noses.

Culturally Yours,
The Editor's Pauwelsii.

A. B. Porter—An Appreciation

• The Annual General Meeting of the Orchid Society of N.S.W. Ltd. held in October, 1954, saw the election to the office of President, one A. B. Porter, a prominent member of the Society in other capacities.

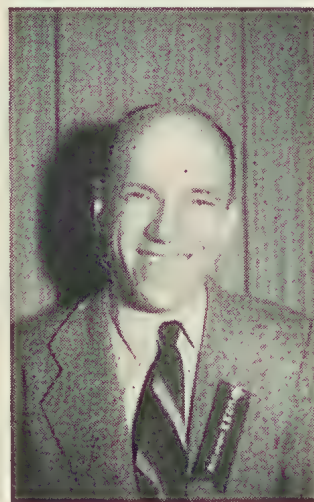
Mr. Porter's assumption of the Presidency followed two very successful terms each of three years in that position by Messrs. A. R. Begg and John Bisset respectively; periods of remarkable progress by the Orchid cult generally and the Orchid Society of N.S.W. Ltd. in particular. The results of this progress were a remarkable increase in membership of the Society and what was, statistically at any rate, the most successful Orchid Festival ever held.

This was the scene when the new President took office. The question on all lips colloquially was—"How will he go?" Nobody realised then that there lay before us a time of difficulty and a severe test of the President's ability to hold the Society's organisation together. We were about to enter on that experience of drastically falling prices with the natural reaction of flagging enthusiasm. It redounds to the credit of Mr. Porter that what might easily have been a crisis was felt only as a ripple; and due entirely to his steadfast optimism.

Christened . . . well, never mind, but because of the names "inflicted" on him by his parents, A. B. Porter prefers to be known to his friends as "Abe", and this he is affectionately called. He has been a member of the Committee of Management for many years, a Judge for an almost equal period, and perhaps the Society's leading authority in Orchid lore. Due to this knowledge he has been much in demand in describing the various exhibits at our monthly meetings and also as a lecturer.

As a chairman Abe Porter was always impartial and tolerant of the other person's view-

point. His usual approach to a subject was cautious, which gave ample time for a keen intelligence to assess the possibilities and weigh both sides carefully.



Mr. A. B. PORTER

President of O.S., N.S.W. Ltd. for previous three years.

The Orchid Society of N.S.W. Ltd. is indebted to Abe Porter for his services as President and for the liberal dissemination of Orchid knowledge. May he remain with us many more years with pleasure to the members and credit to himself.

—John Davis.

Climate and Orchid Culture

J. N. RENTOUL

• One of the fascinating things about orchid culture in Australia is the amazing range of conditions that exist to try the patience of growers. Paralleling this range is the complete lack of appreciation of the difficulties of the other fellow, and the constant tendency of visitors from other States to advocate, and even press, the cultural conditions applicable to their particular area on every other grower of similar genera in other States.

Perhaps the States possessing the greatest lack of cultural study and experience are South Australia and Western Australia — or that could be a matter of ignorance on my part. Contact interstate is most constant between Victoria and New South Wales. Geographically situated as they are, that is understandable; but the cultural affiliation begins and ends on the note of common interest; it does not extend even to a remote degree when cultural conditions are considered. This is perhaps applicable to all orchids, and that success should be Victorian with the imposition of New South Wales growing methods is mere wishful thinking. It is only fair to state that the reverse is equally valid. So we each have to devise methods that suit each area, and South Australia and Western Australia, which have little in common climatically with either New South Wales and Victoria, must work out their own destiny. That is a conclusion which is unfortunate for all growers in all States, as we have no common basis on which to work. But if the interest is lively enough in South Australia and Western Australia then an analysis of their climatic conditions should be very valuable. The humidity factor would probably emerge as the most important, as it tends to decrease in intensity in a traverse from the eastern to northern coastline around to the southern and western coastline.

It is necessary to know and appreciate the differences between Melbourne and Sydney (to generalise what could be regarded as the complete areas of the two States where orchids are grown), more particularly in relation to the culture of cymbidiums, being the genus most cultivated. It is far less applicable to cattleyas or to other lesser grown genera.

In the first place, it is necessary to grow cymbidiums under glass in Victoria, that is, exclud-

ing one or two species that will grow and also flower outdoors. There is a very recognisable difference in the flowers produced by the two methods even in these species. That is not to say that it is impossible to grow or flower many hybrids outdoors in Victoria—but, after all, we grow them for their flowers, and not as a botanical challenge to Nature. The flowers produced bear no relation to glasshouse-grown flowers. Perhaps the higher humidity of New South Wales helps a little, but the four degrees of latitude involved must also play a part, and it is in the enlargement of this factor that some confirmation of unsuitability of New South Wales culture in Victoria, and vice versa, will be found.

This four degrees of latitude produces first a more even daylight period in New South Wales, together with a climate that has been affected by a traverse of the width of Australia or the influence of the somewhat balmy Pacific climate, as compared with the type of weather generated in the Southern Indian Ocean and the Antarctic regions, which is experienced in Victoria.

The situation of Sydney in particular, and perhaps the entire coastline of New South Wales from the vicinity of Bega almost to Coffs Harbour, is such that the humidity influence, that would be lost inland, is present to a degree that tempers the heat of the sun in relation to evaporation. Evaporation, perhaps more than anything else, would negative the best of culture outdoors. Humidity is present to a lesser degree in Victoria in the period when it matters most—the growing season. At other times we have the humidity without the necessary warmth to complement it. That is the most cogent reason why we grow our best cymbidiums under glass, allied with moderate heating units to get the best results.

Freak seasons are never best for comparative analysis, but unfortunately that type of data is quoted here. In Victoria of recent years, we have had some three or four weeks in January and early February that are reminiscent of the more uncomfortable months in New South Wales. It is of no assistance to the growth cycle of cymbidiums under glass. In the winter just past, Victoria has had more sunlight than for several decades.

It was also the warmest winter we have experienced for over fifty years. Yet it, too, was of no assistance in the growth cycle or the flowering cycle of our cymbidiums. For the reason we must go back to the latter quarter of 1956, when there was so little growth that the plants scarcely began to move at all until nearly Christmas. It would be interesting to know if that factor was also responsible for the later flowering period in New South Wales.

Temperature comparison in one week of September is interesting. It does not disclose so much difference that would be considered vital, but that difference occurs in the very critical range of fifty to sixty degrees. The relation of one factor to another, such as sunlight and actual warmth, are so variable that nothing can be derived from an examination of the incidence of one in relation to the other. A careful examination of both reveals that temperature is far more important than sunlight. But the surprising feature also arises that, regardless of artificial heat applied, there is no hastening of flowering by its use; sun heat, whether as direct light or only as warmth, is far more effective. This is important in comparing the cycles and methods of growth in New South Wales and Victoria.

An analysis of temperatures for one week is as follows:

Melbourne:

Maximum	Minimum	Average
64.7	55.9	60.2
77.8	46	62.1
48.1	42.2	45.1
51	42	46.5
58	45.3	51.6
58	47	52.5
56	47	51.5

Sydney:

Maximum	Minimum	Average
66	51	58.5
68	51	59.8
72	57	64.5
61	47	54
66	49	57.5
76	48	62
71	53	62

Melbourne: Spike Growth in Inches

3"
3"
3"
1"
1"
1"
1"
1"

The maximum fluctuation in the critical range of temperatures in Melbourne in one day was seventeen degrees, as against ten degrees in Sydney. What that seven degrees would have meant in the elongation of flower spikes or the opening of flowers is, of course, one of the imponderables. But it would be significant, particularly if the plants were both outdoors.

The maximum difference in range of temperatures in one day in Melbourne was 31.8 degrees; in Sydney, 28 degrees; so that both climes in the one week went from the warmer range of spring weather to the chill of winter. The recovery rate in Sydney was compensating, however, as the temperature reverted to over seventy degrees the day after the minimum, as against a drop to forty-six degrees in Melbourne followed by a day with a maximum of 48.1. There lies the crux of the situation, and the strongest factor operating against adoption of New South Wales cultural methods in Victoria. The average temperature over the week under consideration was 52.8 in Melbourne and 59.8 in Sydney.

The rate of growth of spikes, or rather the elongation of the spike before the buds begin to separate on the stem did not seem to bear a very close relation to the average temperature, though they can be integrated fairly closely in the table. But one very surprising thing manifest in the measuring and checking morning and evening was that no growth occurred in the daytime that was measurable. The growth all occurred at night. It is only reasonable to infer from this that the flowers also grow at night and in darkness, though they tend to develop constantly once the bud breaks, just as much in daylight as in darkness. The warmth of the glasshouse has no effect if external conditions are not conducive to growth. Apparently the sunlight-food transfer to growth is a process somewhat akin to a factory making a composite article. All the parts are manufactured during the day and assembled by the night-shift. If the day-shift has a stop-work meeting on account of the poor light or the cold working conditions then the night-shift output is down.

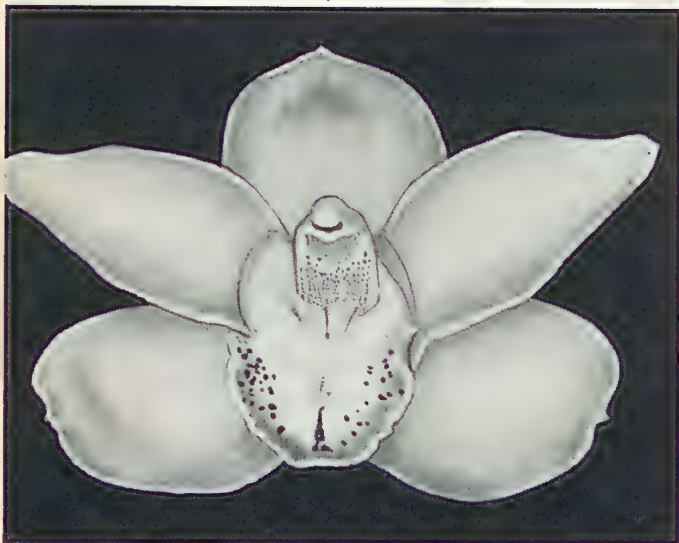
It is a nice comforting sensation that we can almost feel for the plants in their struggle against their working conditions, and this is really what we must do to get the best from them.

Natural conditions play a large part, but composites and their modification to suit various climes and areas assume an almost equal importance.



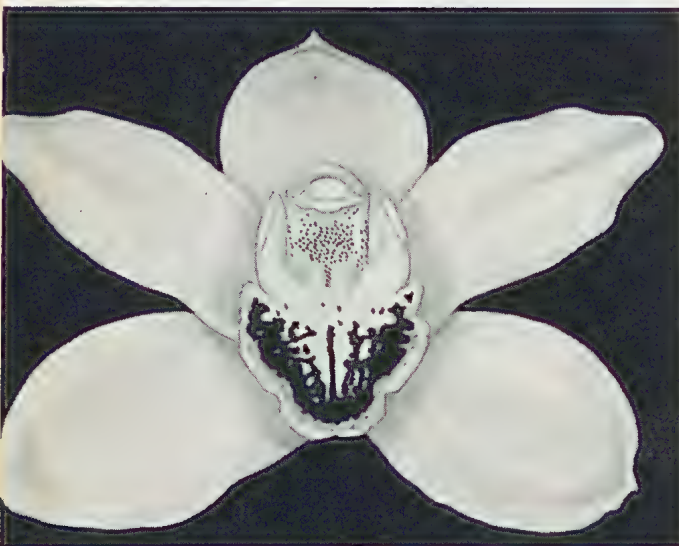
CYMBIDIUM GIRRAHWEEN 'GLORIA'

A.M. O.S. of N.S.W. Ltd. 1945. Owner and photographer, F. Moulen, who is responsible for many of the photos which appear in the A.O.R. Twelve years have passed since this lovely cymbidium gained its award. How many seedlings have been flowered since 1945 to this standard?



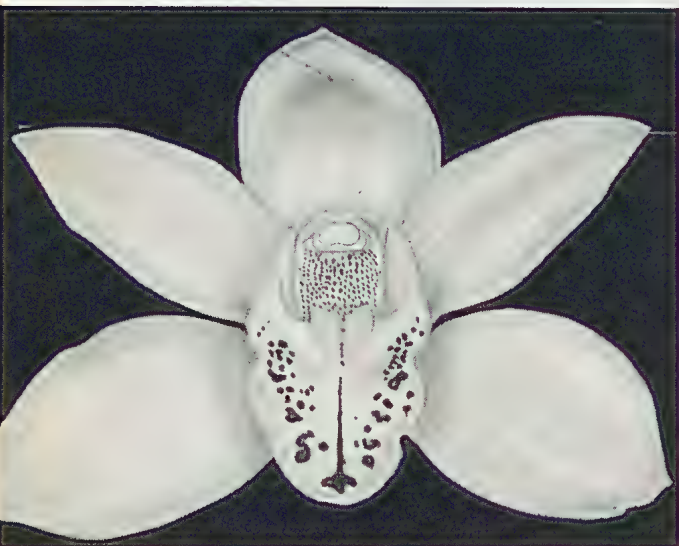
**CYMBIDIUM HUBERT CAMBOURN
'LOIS'**

*H.C.C. O.S. of N.S.W. Ltd. 1957. Owner, B. Watkins.
Natural size across petals $4\frac{3}{4}$ inches. Spike carried
seven flowers, pastel pink petals and sepals, the lip white
edged with deep pink. Reg. No. 362.*



CYMBIDIUM DORAMA 'FAIRFIELD'

*H.C.C. O.S. of N.S.W. Ltd. 1957. Owner, Mrs. S. Hayter.
Natural size across petals $4\frac{1}{2}$ inches. Petals and sepals
a pale pastel green, the creamy white lip heavily marked
with red. Plant carried two erect spikes. Reg. No. 353.*



CYMBIDIUM JASON 'MARBLETHORPE'

*H.C.C. O.S. of N.S.W. Ltd. 1957. Owner, S. Cooke.
Natural size across petals $4\frac{3}{4}$ inches. Spike carried
twenty-three flowers and buds. Very bold flowers with
yellow green sepals and petals, lip white marked
with red. Reg. No. 350.*

It was at one time common for interstate visitors, travelling in either direction, to attempt the conversion of their hosts to their own methods. The Sydney pots were always too large, in the view of Melbourne visitors, for the plants they contained, yet surprisingly enough the plants prospered and flowered extraordinarily well. It is necessary to outdoor growth and culture that the root system be adequately protected and fed, the two being equally important. There never was any reason to restrict the size of pots for the sake of space in New South Wales, but there was every reason to keep them large, so that the infrequent watering was unimportant so long as rain fell. If small pots had been used it is fairly safe to say that New South Wales would never have been pre-eminent in the numbers and cultural methods of the genus cymbidium. It was only the observance and cultural soundness of some of the growers, who devised a method of growing these plants *to suit their own conditions*, that brought success in the first place. *But it would be futile to try to make that set of conditions fit a completely different climate, either dry or wet, hot or cold.*

The more knowledgable Victorians also devised a set of conditions to suit the culture of cymbidiums in glasshouses, as they found that though they would thrive without heat at all in some areas, they did not thrive outdoors. Though the methods have been modified, and even today vary from grower to grower, they would not succeed in New South Wales, where cymbidiums do not thrive when completely glasshouse grown. The better product is always found on a hardy outdoors plant. But there is one cultural point that could well be followed and perhaps modified to perfect the flowers. In our Victorian glasshouses where the flower buds are sprayed with cold water every morning, as well as the foliage, there are fewer spotted flowers though there is perhaps a little more risk of erwinia if the ventilation is not watched. That should present no worry in New South Wales.

In Victoria the pots are smaller because we must get more of them into a restricted space if we would make the area productive to at least fifty per cent of the plants each year, which would be a fair figure. In these smaller pots it is possible to compost the plants to the aim of production of clean white roots. This is another cultural factor overlooked in Sydney and New South Wales generally, that should be rectified by further modification of the com-

posts. These are points where we can, with benefit, transmit to one another what people with poor vocabularies term "gimmicks"—an abhorrent Americanism. "Factors" is their correct term, and they go to make up a cultural method that is suitable only in the area for which it is devised.

It is not wisdom for any grower anywhere to try to foist his ideas on to someone who lives in a locality unsuitable for their realisation. Nor is it wisdom for any grower anywhere to say that he, as a grower, is neglected by the purveyors of cultural advice because his plants do not thrive. Like the pioneers of orchid culture in Australia, he must make the effort to solve the problems presented by his own particular area. That takes time . . . and losses . . . and persistence . . . but there must be some combination of factors that will supply all the answers and bring success.

—43 Denman Ave., Glen Iris, Victoria.

• **ILLAWARRA DISTRICT ORCHID SOCIETY:**—The following are the Office Bearers of the above Society for 1958:

President—Mr. E. Atwell, 344 Main Road, Austinmer.

Hon. Treasurer—Mrs. W. H. Newman, 11 Campbell Street, Woonona.

Hon. Secretary—Mr. F. A. Bignall, 49 Market Street, Wollongong.

The Orchid Festival of the South Coast will be held in the Pioneer Hall, Church Street, Wollongong, on Friday and Saturday, the 12th and 13th September, 1958. Judges to be appointed by the Orchid Society of N.S.W. Ltd.

• **TASMANIAN ORCHID SOCIETY:**—The Annual Show of the Tasmanian Orchid Society was held in the Town Hall, Hobart, early in October. Although the blooming proved to be later this year a very good response was made to make the individual exhibits attractive and some very fine blooms were seen.

It was our good fortune to have this year as Judges, Messrs. Allen, McCraith and Hodgson, of Melbourne, and we greatly appreciate their making a special trip to Hobart for that purpose.

We also had blooms for display from Mr. L. Sasso, of Sydney, and Mr. J. Rentoul, of Melbourne, and they proved of great interest to the public generally.

This opportunity is taken to thank the gentlemen mentioned for helping to make our Show the most successful we have had.

Cymbidium Show Flowers—Old and New

A. R. BEGG

• Without doubt Balkis 'Luath' has proved itself our top formal show cymbidium; its ease of growth and flowering, and the fact that it wins more championships and prizes than any other cymbidium in this State, supports this statement.

Dorchester 'Jeanette' is even a purer white with individual flowers sometimes finer than Balkis 'Luath', but the shortage of flowers on the spike is the drawback. I recall at one show a plant of Dorchester 'Jeanette' was on the bench; the spike held four magnificent flowers, but can championship honours be given to a spike with only four flowers and poor display?

Of the many plants of Girrahween 'Enid' displayed at the Sydney shows and also at Newcastle and Gosford during 1957, I did not see one in top condition. Practically all the flowers were small, a few had good form, and two or three had good colour, but many were insect marked on the sepals and petals and therefore naturally not considered for prizes. There is no doubt Girrahween 'Enid' is a very difficult cymbidium to flower to perfection, and I can imagine the reaction of overseas growers when they flower it poorly for the first time.

If we include Swallow 'Soulangeana', Louis Sander 'Kirribilli' and Girrahween 'Gloria' with the above three cymbidiums we have the main prize winners over the last twelve years or so. This is not good and we want to see some new top flowers, otherwise interest will fail.

The future is not without hope, however, and I feel with the breeding programme in progress we can reasonably expect some good new cymbidiums to challenge the old brigade.

Amongst the possibilities flowering this season was Cymbidium Cooksbridge (Alexandria x Kangar) which were mostly pinks. This cross came into prominence here in 1955 with 'Elvina' winning the Orchid Festival championship.

Miretta (Claudette x Mirabel) 'Matchless', a fine shapely green, looked good to me at this season's N.S.W. Orchid Festival held in Sydney.

Dorama (Dorchester x President Wilson) 'Fairfield', a large bold cream flower of good substance with a suggestion of green in the colour, was a good new cymbidium.

Swallow 'Kingsford', runner-up at the New-

castle Show, although not having the form of champion Balkis 'Luath', has a beautiful rich pink colour which was much admired by growers.

English seedling Rosario (Rosette x Alexanderi), a medium size clear rich buttercup yellow of good shape, had only six flowers, but this no doubt will be improved upon.

Another English seedling of promise was Rosita x Remus 'Wondabah', a mushroom pink of good form and substance, though a clear colour may be its problem.

The best Australian raised seedling I noticed this year was Hubert Cambourn 'Lois' (see this issue).

A.W.B. x Madder Rose 'Sailor Bay', a fine light pink cymbidium of good shape, colour, texture and substance; the only fault was a slight furl of the petals. It subsequently received the award of H.C.C. from the Orchid Society of N.S.W. Ltd.

This seedling, together with several more of the same cross, was exhibited at Gosford Show; all had plenty of substance, no doubt derived from the parent Madder Rose.

Getting away from the formal flowers and not being critical as to shape, the best new arrival in the coloured classes was Robin Redbreast 'Lilyvon' (Constance Flory x Remus), easily the best new red shown for some time. The colour was brighter than plum shade, and was strong and even with less venation than is usual with red flowers; I would say that in form and size it was better than most Carisbrooks and quite a welcome new cymbidium.

An Australian raised seedling at Gosford was noticed in Priam 'Ada Meech' x Sparta 'Etna', a very strong plum red though the flowers were very "cuppy" and small; it may do better on a mature plant.

The hybrid Brissie (Pixie x Lucy) was nicely flowered a good buttercup yellow.

Several cymbidium seedlings Elouera (Alexanderi 'Westonbirt' x Girrahween 'Enid') were above average, mostly whites with good size and substance.

Apollo, F.C.C., x Stonechat, shown at the Orchid Festival, was much admired; a beautiful combination of pastel green sepals and petals with a lip of heavily marked maroon.

And what of the future?

Rosanna 'Pinkie' has received much publicity in recent times in this area. It was awarded the F.C.C., R.H.S., in 1931—26 years ago. It has been used as a parent many times since then, mainly crossed with diploids, but of the progeny very few have reached this country that were of any outstanding merit. Its best effort has been when crossed with Alexanderi 'Westonbirt' giving us Balkis ($\frac{3}{4}$ Alexanderi 'Westonbirt'), both tetraploids. A remake of this cross would be popular. Also Rosanna 'Pinkie' x Balkis should give us some prizewinners in the future, although again mainly white flowers.

I should like to see Rosanna 'Pinkie' crossed with *our* Balkis 'Luath', both tetraploids. I think we would get something out of the box.
—59 Drumalbyn Road,
Bellevue Hill, N.S.W.

• **EAST HILLS AND DISTRICT HORTICULTURAL & ORCHID SOCIETY:**—

The following are the Officers elected at the Sixth Annual Meeting for the year 1958—

Patrons—Ald. C. H. Little (Mayor of Bankstown), Mr. F. Slattery.

President—Mr. S. R. Wregg, re-elected.

Vice-Presidents—Messrs. F. Sullivan, G. Webster.

Hon. Secretary—Mr. P. J. Jones, re-elected.

Hon. Treasurer—Mrs. R. E. Ford, re-elected.

Committee—Mesdames S. R. Wregg, R. Bernauer, Colefax and Messrs. R. Bernauer, N. Elliott, N. Rowlands, R. Smith, R. Davies, J. Purdy.

Librarian—Mr. W. Smith.

Hon. Auditor.—Mr. E. Moffatt.

The Society had its most successful year in 1957, and much enthusiasm is being shown. The Society having gained a number of new members, a bigger and better success is anticipated for the coming year.

The monthly meetings are held in the Methodist Church Hall, River Road, Revesby, on the third Thursday of each month at 8 p.m., and new members and visitors are always welcome.

• **FRONT COVER:**—*Odontoglossum* Tromar 'Silver Lining', a brilliant dark red *Odontoglossum* with an arching raceme, was a prize winner in a monthly competition at the St. George Orchid Society. Imported from Charlesworth & Co. Ltd., England, in 1954, the plant gives of its best after having become acclimatised.

• **N.S.W. ORCHID SOCIETY LTD. AWARDS:**—Continued from Volume 22, No. 3, September, 1957.

Reg. No. 343—*Cattleya* Bow Bells 'Ermine'. H.C.C. E. F. Moffatt—29/4/57.

Reg. No. 344 — *Cattleya* Bow Bells 'Madonna', H.C.C.—Dr. Kaw—27/5/57.

Reg. No. 345—*Cattleya* Mascotte 'Rapallo'. H.C.C. J. Chapman—27/5/57.

Reg. No. 346—*Phalaenopsis* Grandiflora x *Nivea* 'Gowrie'. H.C.C. J. Chapman—24/6/57.

Reg. No. 347—*Dendrobium* Lady Constance 'Cosette'. A.M. H. Mills—6/7/57.

Reg. No. 348—*Cypripedium* Paddy Joe 'Belvedere'. H.C.C. Mrs. J. Bell—17/8/57.

Reg. No. 349 — *Cymbidium* Fascination 'Regal'. A.D. L. Giles—17/8/57.

Reg. No. 350—*Cymbidium* Jason 'Marblethorpe'. H.C.C. S. G. Cooke—26/8/57.

Reg. No. 351—*Phalaenopsis* Reve Rose 'Rapallo'. A.M. J. Chapman—26/8/57.

Reg. No. 352—*Miltonia* Imperial 'Elvira'. A.M. H. J. Lawler—9/9/57.

Reg. No. 353—*Cymbidium* Dorama 'Fairfield'. H.C.C. Mrs. S. Hayter—11/9/57.

Reg. No. 354—*Cattleya* Poncarral 'June'. H.C.C. L. Sasso—11/9/57.

Reg. No. 355—*Dendrobium* Model 'June'. H.C.C. L. Sasso—11/9/57.

Reg. No. 356—*Cymbidium* Mayfair 'Stonehurst'. A.D. J. Chapman—11/9/57.

Reg. No. 357—Meritorious Display. Gold Medal. J. C. Chapman—11/9/57.

Reg. No. 358—Trade Display. Gold Medal—F. Slattery—11/9/57.

Reg. No. 359—Special Exhibit. Silver Medal. H. J. Lawler—11/9/57.

Reg. No. 360—Meritorious Display. Bronze Medal. Mrs. K. C. Thompson—11/9/57.

Reg. No. 361—Meritorious Display. Bronze Medal. F. W. Jones—11/9/57.

Reg. No. 362—*Cymbidium* Hubert Cambourn 'Lois'. H.C.C. B. Watkins—30/9/57.

Reg. No. 363—*Miltonia* Lady Veitch 'Wondabah'. A.M. L. Giles—9/10/57.

Reg. No. 364—*Dendrobium* Queen of Gatton 'Adriatic'. A.M. F. Lipanovich—9/10/57.

Reg. No. 365—*Miltonia* Atina 'Elvira'. A.M. H. J. Lawler—28/10/57.

• Having seen the advance proofs of Fred. Moulen's book "Orchids in Australia," enthusiasts are assured of satisfaction when the book is finally received. Being printed in several different languages could be one of the reasons for copies not yet being received.—H.J.L.

Orchid Hybrids

A Paper Delivered to the Queensland Orchid Society by Dr. A. W. Hartwig
on the 9th August, 1957, Developed from The American Orchid Society
Bulletin of March, 1957.

• A hybrid is the offspring of a cross between two different species, or a species and a hybrid, or between two hybrids. Natural hybrids are those found in Nature, developed without the intervention of man and are not uncommon, especially in certain genera.

When orchid growers talk of hybrids they generally refer to the so-called artificial hybrids—those made by man from species, natural hybrids or previously made artificial hybrids. Most orchids now cultivated are artificial hybrids and the future will undoubtedly see a continuation of the development of hybrids. While this is essentially true for the cut-flower trade and for show or exhibition, it is equally true for the hobbyist with a vital interest in improving the vigour and quality of the plants he flowers. This development of hybrids heightens rather than diminishes the interest and importance of species, for all hybrids originated from species and the characteristics of hybrids can best be understood through a thorough knowledge of species. Also since the formalised and sophisticated beauty of the hybrids bear a different appeal than the individual charm of the species, most growers find the pleasure of growing hybrids is increased by the growing of species which provide desirable contrast of interest.

As a horticultural pursuit, orchid growing began with the importation and raising of species, interest in which remained dominant until rather recently even though the first orchid hybrid was produced more than one hundred years ago.

The first artificial orchid hybrid ever to flower was a cross between *Calanthe furcata* and *Calanthe masuca*, named *Calanthe Dominii* to honour the hybridiser, Mr. John Dominy, of the Veitch Exotic Nursery in Chelsea, England. Mr. Dominy made the cross about 1853 along with some crosses of cattleyas, sowed the seed in 1854 and flowered the novelty on 28th October, 1856. It created a pleasing sensation among orchid growers and consternation among the orchid Botanists, who feared the consequences to orchid taxonomy and nomenclature (how right they were). Some of the cattleyas flowered in August 1859. In November 1859 *C. Dominiana* (*C. Intermediate* x *C. maxima*)

flowered and was awarded a F.C.C. by the R.H.S.—the first such award to any orchid.

For more than thirty years the English growers were the only successful hybridisers, Mr. J. Dominy, in fact, being dominant in the field. Interest was more in finding if certain species or genera would cross, than in breeding orchids with a goal in mind. This was natural enough since future progeny could not even be guessed at until the rudimentary behaviour of orchid hybridising could be determined. Later new crosses were developed in France, Belgium and elsewhere, and although success was more often exceeded by failure, records of considerable accuracy were maintained. These soon channeled effort along the lines that had produced greater success.

From this new field of orchidology resulted:

1. The need to establish a system of nomenclature.
2. The correlation of records and their publication.
3. A system of credit or authorisation for crosses.

With early crosses taxonomists were distressed because many of the progeny of bi-generic crosses (i.e., involving two different genera) varied in their inherited characteristics so some flowers produced resembled one parent, while other plants from the same seed pod gave flowers resembling the other parent. Initially the offspring were named depending on which genus they most resembled, e.g., a cross by Dominy of *C. Mossiae* x *L. purpurata* was called *C. exonienis* while elsewhere it was called *L. canhamiana*. Also a cross of *C. intermedia* x *Sophranitis grandiflora* produced seedlings named *Laelia Batemanniana*.

While the problem was most acute in regard to bi-generic crosses a lot of difficulty arose in respect of crosses of two species within a genus due mainly to the multiplicity of names given a single cross. The fever of hybridising infected many amateurs in England and the Continent, each one eagerly crossing this and that in almost happy abandon, and naming the progeny to their own fancy until there were popular crosses with twenty or more different names.

It was Robert Allen Rolfe, the founder of *The Orchid Review*, who became the prime figure in harnessing this ominous tide. In 1887 he published a paper on "Bi-Generic Orchid Hybrids" in the *Journal of the Linnean Society*, which has become an orchid classic. He proposed that bi-generic hybrids be placed in artificial genera to be created by uniting the names of parent genera in some euphonious combination. He proposed such hybrid genera as *Laeliacattleya* (LxC) and *Sophrocattleya* (SxC). Further, these hybrid genera were to include crosses between parent genera regardless of which had been the seed parent. This system was ultimately adopted, but not without much protest.

In 1887 and continuing through 1894 James Veitch & Sons published their now famous and still invaluable "Manual of Orchidaceous Plants" in which they adopted Rolfe's system and terminology and noted and described most hybrids known to that time.

During the next decade or two interest in hybridising grew apace; not only were innumerable new crosses made, but scientific studies in the various phases of hybridising were pursued. Techniques of pollination and fertilisation, methods of seed germination, the occurrence of natural hybrids and their scientific verification by duplicating them artificially were just a few of the investigations undertaken. In 1902 C. Chamberlain Hunt, whose brilliant observations and astute deductions have become the base on which our understanding of orchid genetics is founded, published a paper — "Mendel's Law Applied to Orchid Hybrids"—which was the first printed account of modern genetics in reference to orchids.

In 1906 Sanders published their first list of Orchid Hybrids with an addendum in 1907. These lists finally resulted in a full volume published in 1915, which has become the Bible of Orchid hybridists from then until now. This edition was arranged in two parts. From Table I the reader could find the parents of a hybrid in the alphabetically arranged generic listings. In Table II the parents are so listed as to make it a simple matter to find the name of any cross or if such a cross has been made. Sanders List of Orchid Hybrids is a valued possession of all orchid hybridists and many hobbyists, and even more is a monument to the patience, industry and enterprise of the late Mr. F. K. Sander and his family successors.

Thus we have a glimpse of why things are

what they are today in Hybrid Registration and the nomenclature of orchid hybrids. Let us now see what they are—

Rules of Nomenclature for Orchids

1. Hybrids are designated by a formula, the name of the parent bearing the pod preceding that of the pollen parent.

2. In selecting names for a class or variety, the following points should be emphasised: distinctiveness, simplicity, euphony, ease of pronunciation and spelling, and indication of origin or parents.

3. All crosses between two plants of same species, regardless of variety, remain within the species, e.g., *Cyp. insigne* var. *Harefield Hall* and *Cyp. insigne* var. *Sanderae* are *Cyp. insigne*.

All crosses between two different species or hybrids or a species and a hybrid are hybrids, e.g., *C. mossiae* x *C. trianae* is *C. Trimos*. All crosses having the same parentage, including reverse crosses, bear the same name regardless of variety.

4. Names likely to be confused with one another should be avoided, e.g., use of *Alexander* should preclude the use of *Alexandra*, *Alexandria*, etc., as names or varietal names with the same genera or allied genera.

5. Where personal names are used the prefix Mr., Miss or equivalent initials are not permitted, e.g., Mrs. Louise Murray should be Louise Murray.

6. The name of a living person should not be applied to a hybrid without that person's consent.

7. The articles 'A', 'The' or equivalent are not permitted, e.g., 'The Captain' should be 'Captain'.

8. Plants or varieties imported should retain their name in the original language without mutilation, e.g., *C. Coeur de Lion* should not be *C. Lion Hearted*.

9. The name of a varietal form should be placed after the species or hybrid to which it belongs. If a botanical variety the name is preceded by the word 'variety' usually contracted to 'var,' or 'v', e.g., *Dend. fimbriatum* var. *oculatum*. If a horticultural variety the name is set off in single quotes without the use of the word 'variety', e.g., *Cym. Alexanderi* 'Weston-birt'.

10. If possible, names of hybrids or varieties should consist of one word—three is the maximum.

11. No hybrid or horticultural varietal name may be of Latin form. This is reserved for

names of species or botanical varieties.

12. A species or hybrid remade, which is superior to existing forms of the same name, may be given a name indicating its origin, e.g., *Lc. Canhamiana alba* Young's strain.

13. A varietal name must be given to a horticultural variety when it receives an award.

14. A varietal name may be given to a clone when it is desirable to distinguish it from siblings.

15. To avoid confusion, existing names in common use given to plants before the International Codes were adopted are accepted unless they have been changed in conformity to provision of these codes.

General Information of Hybrids

Hybrids are variable while species are reasonably constant, e.g., *C. Labiata* x *C. Labiata* gives progeny similar not only to one another but also to the parent species. With hybrids the progeny are somewhat intermediate bearing traceable influences of each parent in different degrees, varying among themselves, sometimes markedly. Generally primary hybrids, i.e., from the cross of two different species, vary mostly within an intermediate range between the two parents. Such variation will be in size, vigour, form and colour even in plants from the same seed pod. This is not surprising as the progeny are from different fertilised ovules and bear the relationship of ordinary siblings, i.e., they are brothers and sisters.

Repeat crosses with the identical parents will again vary as a rule, though the range of variation will generally be similar. If crosses are made with different individuals of the same name each set of progeny will vary still more from the other sets. The quality of hybrids is dependent on the individual (clone) parents. The name of the hybrid, however, is given to a cross between any two plants of a given name, not to the offspring of two individual clones. These hybrids of a given name can be extremely variable with plants ranging in quality from forms far superior to the parents to forms that shame the orchid family, e.g., any *C. mossiae* x any *C. warscewiczii* gives *C. Enid*. A fine stud plant of each will produce fine offspring. But there are thousands of *mossiae* and of *warscewiczii*. Any one can cross any two of these and produce *C. Enid*—most will be inferior to the parents, but each is a hybrid *C. Enid*. Responsible breeders have long recognised this and learned the breeding qualities of certain stud plants which they use as often as possible. Even so, the progeny will

vary and not every plant will be an award winner. But the chances of a good plant are high.

The variability is usually compounded when we go further generations in breeding. Hybrids of hybrid parents vary considerably more than primary hybrids and the variability increases as the complexity of the ancestry increases especially as the number of component species is increased and it is increasingly difficult to check back to what actual clones were used as remote ancestors. Occasionally such complex crosses give a high percentage of good progeny, but then it is important for the hybrids to be identified by the breeder's cross number, not merely by name.

Generally, hybrids produce progeny that vary in proportion to the degree of difference between the parents, i.e., the greater the gulf between the parents the greater the range of intergrades possible. But even here exceptions arrive due to genetic factors such as dominance and recession, intergression and the like.

Another factor in hybrid variability is that a hybrid when self-pollinated or crossed with another plant of the same name will produce offspring which vary in a full range of characters of the ancestral species from one extreme to the other, e.g., *C. Enid* x *C. Enid* will give a hodgepodge of the assorted characters of *C. mossiae* and *C. warscewiczii*. Yet such progeny is still called *C. Enid*. Occasionally a cross of this type produces a worthwhile plant, but such an individual is rare and should be seen in flower before purchasing.

While hybrids are variable in general appearance, this variability extends also to size of plant, vigour of growth, size, form, colour and substance of flower, number of flowers and time of flowering. All these are the result of the vagaries of Nature and not an attempt by orchid growers to confound the novice. This variability of make up gives both interest and virtue to orchid hybrids. Species as a rule are more inflexible—they bloom at definite times, have definite limits in size and have pretty fixed ideas as to the way they want to be treated.

Advantages of Hybrids

1. Adaptability. They seem to adjust to variations in environment and culture more readily than do species. This is specially marked in the seedling stages from flask to thumb pot.

2. Vigour. Although orchids, whether species or hybrids, generally take a lot of punishment before expiring, species often do not have the vigour of growth that hybrids have, even in

good environment. This is the result of 'hybrid vigour', a phenomenon noted in most plant families and even in the animal kingdom. Inbreeding produced stability but lessened vigour and adaptability in plants as well as Pharoahs—though every hybrid is not automatically vigorous. Breeders strive for vigour in orchid hybrids and occasionally a plant lacking vigour is used as a parent for other characteristics, e.g., *S. grandiflora*. Even then the offspring are usually more vigorous than the parent, but less so than other hybrids.

3. Free blooming, i.e., they bloom more easily under a wider range of conditions and different plants will bloom over a greater period of time.

Blooming season is less fixed and floriferousness is greater—often because of increased growth, multiple leads and in some two blooming seasons a year.

4. Improvement in flowers. It is probably true that the finest hybrids are equalled or surpassed in every quality by some form of parent species. A white hybrid *phalaenopsis* with flowers five inches across would attract attention in any green house, yet specimens of *Phalaenopsis amabilis* with flowers five inches or more have been collected in the wilds and have been exhibited. Many *cattleya* species have been exhibited in sizes that make our hybrids modest—*C. warszewiczii*, eleven inches; *mossiae*, nine and one-half inches; *trianae* with petals three and one-half inches wide, are a few examples. Yet we may say that hybrid flowers have improved on the species, for most of the latter have only one size or colour or form or substance, while our better hybrids have high levels of each quality. Good hybrids have good size, good colour, good form, good substance and good floriferousness in one plant.

5. Inexpensive. In most genera hybrids are as cheap as species. More hybrids sell for high prices, especially flowered plants which have received awards or have been recognised as fine stud plants; and even unflowered seedlings if their parentage offers great expectations, are higher priced than comparable species. Most high quality species are costly because of their value in breeding. Many hybrids can be bought cheaply in flasks or community pots, and while some of these may be lost, much experience is gained in raising them, and after some years you have them flowering at low cost.

6. Availability. Because of the millions of hybrids raised, one may get a prize plant from a community pot. To get a similar species you buy a blooming plant at a high price or import

in quantity with the knowledge that fine forms are practically impossible to discover—the intensive collection of decades has skimmed the cream off.

Advantages of Species

1. Constancy. Although there are good forms and average, the chances are you get what you expect when ordering from catalogue.

2. Predictability. They do what is expected and when.

3. Hardiness. Given necessary cultural conditions, species will flower.

4. Distinction. Hybrids tend to a standard configuration while species have more individuality and distinction — what might be called 'personality'.

5. Inexpensive. Especially the odd, interesting and lovely species and not those where the chief value is of the flowers for the cut-flower trade, or for corsage decoration. For true hobby-growing there are hundreds of fascinating species which will delight the eye and purse.

Hybridising has been done chiefly with the *cattleya* group, *cypripedium*, *cymbidium*, *phalaenopsis*, *miltonia*, *odontoglossum* and *vanda*. In these, the hobbyist will, in the long run, be more satisfied with the selection of hybrids. In other species, with exceptions in dendrobies, species will be more satisfactory. Generally, you get fair value for what you pay, but the real economy of buying is in the wisdom of purchase, not the cheapness of the price. Because there is so much variability in hybrids discussed by name, because there are so many different crosses, because new crosses are constantly appearing, or old ones being remade or duplicated (i.e., different parents used in an already registered cross), it is not possible to make recommendations. One might say *C. Enid alba* is a good hybrid for beginners, but many *C. Enid albas* should have been born to blush unseen. It is better for you, a hobbyist, to learn to think and do, rather than to blindly follow others.

• **ORCHID HANDBOOK.** Copies of "Orchid Handbook", a book containing the basic essentials for the culture of Orchids, simply and fundamentally explained, may be obtained from Mr. K. Lamont, Secretary of the N.S.W. O.S. Ltd., 42 Lawley Crescent, Pymble.

The cost is just nine shillings including postage, and as cultural notes of all the popular Orchids are featured together with glass house and bush house construction, the book is of untold value, especially as all the N.S.W. and Victorian awards are contained therein.

Culture of Phalaenopses

Wm. KIRCH

• The *Phalaenopsis* is a genus of orchids that is probably one of the easiest of all to grow, but one that causes more trouble to the amateur than any other.

Phalaenopses grow in nature; on trees or rocks. They usually have overhead, a heavy canopy of shade and protection from the elements of wind, rain and sun. They have large fleshy roots that do not confine themselves to a small area, but run for great distances over the host to such water and food. Indigenous regions are for the most part quite tropical, affording considerable heat and humidity.

The above brief description should afford any good orchid grower with a key to their successful culture. However, since we are not all good or experienced orchid growers, let's translate the above to artificial cultural practices.

1. Housing—They need shade! *Phalaenopses* do not want—nor can they stand, hot, bright sun. Excess light creates stunted plants and burned foliage. The ability to give sufficient light to harden the flowers for cut flower use is, of course, the fine line that distinguishes the professional from the amateur.

They need heat! Completely tropical by nature, *Phalaenopses* must have heat. A night temperature of 60 degrees F. with a daily rise of 20 to 25 degrees F. is ideal. If you rise more than this, you probably are giving too much light and inadequate ventilation.

Thus, to produce shade and heat, in most regions, a glasshouse is essential for *Phalaenopsis* culture. Even in Hawaii, where we grow most orchids under natural conditions, glasshouses are used for *Phalaenopsis* culture.

2. Potting—As stated in the paragraph under natural conditions, these plants have large fleshy roots that in nature run great distances over the host. Large fleshy roots in any orchid indicates a loose pliable medium. I doubt if you would be successful in the culture of *Cymbidiums* if you grew them in rock hard osmunda or hard packed clay soil. For *Phalaenopses*, any open medium that allows ample aeration and water circulation is ideal. We use primarily Hawaiian Tree Fern and Fir Bark cultures. An alternative to this is slab or basket culture, where the medium is hard like a rock or tree and the roots cover the outside surface but seldom penetrate it.

This is successful culture and in reality simulates nature. My objection to it is that plants potted in this fashion are very hard to repot and suffer great shock in such an operation.

3. Watering — *Phalaenopses* do not have pseudo-bulbs or storage space for reserve water supplies as do many orchids like *Cattleyas*, *Dendrobiums* or *Cymbidiums*. As such, it is reasonable to expect that they must be watered frequently. We water just as often as they show signs of dryness.

4. Fertilizing—It has been our experience that *Phalaenopses* have the appetite of a cow. They are rapid growers and seem to be continually hungry. We practise a constant feeding programme of: once a week on seedlings and twice a month on mature plants. We alternate between liquid solutions of organic and inorganic origin. It is not my purpose to recommend or sell any trade brand of fertilizer as there are quantities of them on the market that are good. The main thing to understand is that to be successful with *Phalaenopses*, you must feed them.

Basically, we have translated nature to domestication. It is appropriate that we now talk about a few of the things that are not evident in nature except perhaps to the birds and the bees. These observations have been made by man and, while artificial, have application to good culture.

1. *Phalaenopses* are rapid growers in the seedling stage and should never want for pot room. This means a constant repotting schedule. If continually moved it is not at all impossible to raise a 1½ inch seedling to maturity in from twelve to eighteen months. Remember — *Phalaenopsis* seedlings should be kept growing! Pot as often as necessary! In nature they just grow and do not need a pot change. In cultivation, this must be provided.

2. *Phalaenopses* are very susceptible to disease. Rots of a bacterial nature and fungus often run riot in this genus. These cultural requirements for good growth of *Phalaenopses* are identical to cultural requirements for pathogens of many types. Thus, one must be on the look out for them and practise a sound prophylactic programme to protect against them. I am not familiar with trade names of bactericides or fungicides available in your particular

region. Hence it is foolish for me to make recommendations. I do say, though, that everyone should have such materials available and not be afraid to use them.

3. Insects can be a problem to Phalaenopses—

a. Red Spider and Mites—create a silvery pattern on the under side of the foliage.

b. Mealy Bug—gets into the roots, down in the leaf axils and on flower spikes.

c. Aphids—cover new flower spikes.

All of these insects are readily understood by entomologists and those in your region can make recommendations for control.

4. Phalaenopses initiate flower spikes on short days. If you understand photo-periodism this will enable you to flower this genus for twelve months of the year. Naturally, one must balance the other physiological factors to light control as this is not a simple basic problem.

All the foregoing represent basic facts. Not a plan for me to enter your home as an outsider and tell you what to do. I am sure, however, that in the remarks made here will be found the answer to most failures that anyone has had or is having with this wonderful genus.

Remember, Phalaenopses are easy to grow! Once you know how, anything is easy. Just analyze your problem and I am sure you will come up with the right answer.

Aloha.

—732 Kapahulu Ave., Honolulu, Hawaii.

• NORTH SHORE ORCHID SOCIETY:

—The Society finished the year on the same high note that has been evident during the last twelve months.

On Wednesday, December 4th, we held our Christmas evening, having two hundred and forty members and friends present. We were very pleased to welcome the President, Secretary and Treasurer of the Orchid Society of New South Wales Ltd., also representatives from six other kindred bodies. Mr. J. Bisset acted as compère and presented a very fine concert with some professional artists supported by plays from our members.

During the year, our Society has staged two very excellent shows, also winning the District Exhibit at the Orchid Festival with the highest points yet recorded. We would like to congratulate Mr. R. Trenerry for winning Champion Cypripedium, and Mr. L. Sasso for winning Champion Dendrobium and Champion Cattleya at the Festival.

North Shore Orchid Society show dates for 1958—

Winter Show—4th and 5th July.

Spring Show—12th and 13th September.

Regular meeting, first Wednesday each month at the Chatswood Town Hall. Visitors welcome.

• ST. GEORGE ORCHID SOCIETY:—

Monthly competitions on each first Tuesday in any month at the Rockdale Methodist Church have proved so popular that even the Miscellaneous Section has had to be separated. A special class is now included for Vandas, Phalaenopses, Odontoglossums and Allied Genera. The popularity of this Society has been proven by ten classes in the Open Section and seven classes in the Novice Section being found necessary to cater for the increased entries.

The Society's Winter Show is scheduled for July 12th at the Palais Grande Hall, Rockdale, whilst the Annual Show will take place at the Regent Hall, Hurstville, on September 8th, 9th and 10th.

Election of Officers at the Annual General Meeting resulted:

Patron—F. M. Slattery.

President—H. R. Crutch.

Vice-Presidents—E. F. Moffatt, L. A. Peaty.

Hon. Secretary—H. J. Lawler, 535 Willarong Road, Caringbah.

Hon. Treasurer—M. Crutch.

Hon. Librarian—K. Johnson.

Hon. Auditors—K. Johnson, H. Wood.

Committee—A. Gillson, H. Goodwin, H. Griffin, W. Jones, B. Schwartz, E. Smith, H. Wight, J. Scott.

The return of Patron Frank Slattery from his New Zealand trip, after a severe illness, was a good omen for the 1958 season. The unstinted praise from the Patron for each and every member of the Committee will be very hard for this year's team to emulate. It seems that Frank is very anxious to make up for lost time and his energy now displayed may well cause the entire Committee to consider sampling the New Zealand hospitality.

Dr. David Badham lectured to an enthusiastic audience of about two hundred members and friends. The topic—"Vandas and Phalaenopses."

Keen interest is being created by the announcement that the N.S.W. Orchid Society will grant a Silver Medal for competition at our Annual Show. This medal is also awarded to other Societies for exhibiting at the N.S.W. Festival each September at the Sydney Town Hall.

Cymbidium Culture

DOS PUEBLOS ORCHID CO.

• Cultural methods practised by growers over the last fifteen years have followed a similar pattern. Most growers have been using a mixture or compost of varying proportions of old tan-bark, new tan-bark and leaf mould, and sometimes a little sand has been added. This mixture has been very coarse and open. Watering has generally been carried out sparingly as it has been suggested that over-watering would cause black rot. Manuring or fertilising was restricted as it was considered by our principal growers that the plants would collapse. The plants have generally been grown in densely thatched ti-tree houses. Re-potting and division was an annual occurrence. The plants have generally been grown in 8 inch and 10 inch terra cotta pots.

A shipment which consisted of a number of single bulb plants and flats containing seedling plants two inches to four inches high arrived by plane in Sydney in February, 1957. After they had gone through quarantine inspection and treatment, we took delivery of them at our nursery at Dee Why.

Prior to the shipment's arrival much work had to be done for the housing of the plants. The site which had been selected at Dee Why was a section of virgin bush country with a gentle slope to the east. The soil consisted of white sand ranging in depth from eight feet to ten feet. There were two small water courses on the property which gave us a good idea of the nature of the underlying soil structures. It was apparent that natural drainage was sufficient to take away surplus water. The site was covered with trees and undergrowth, so clearing was the first task. This proved to be a surprise as we had thought that most of the timber would be shallow rooted, but it proved to be the reverse. Unfortunately, all roots had to be removed as the land had to be ploughed and re-levelled.

A saw-tooth building was constructed out of welded galvanised tube, consisting of 11-20 feet bays and 220 feet long with supports at 10-foot centres in both directions. The sides were glazed on west, south and east. The roof was covered with "LUMITE" shade cloth, a woven plastic material which gives the even 60 per cent shade recommended for Cymbidiums. It is durable in sunlight and, because of its fine weave,

keeps the house relatively free from insects and is also bird-proof.

In this shade house the seedlings were planted directly into the ground. Timber framed beds were constructed 100 feet long and 8 feet wide. The soil was first harrowed and all roots removed. Ten bales of German peat moss were allocated to each 100-foot bed. The bales were put through a Lindig soil mixing machine and spread over the ground. Two to four cubic yards of sheep manure were then spread over each bed with 7lb. of Superphosphate to every 10 feet and thoroughly mixed into the first eight inches of sand until the compost resulted in half sand and half peat moss-sheep manure. The beds were then thoroughly watered for two or three hours on several occasions. This was quite a long process as the peat moss seems to resist absorbing moisture. When thoroughly moistened the ground beds were ready for planting. The single bulb plants were planted 18 inches apart. A hole was made, the roots were spread out and compost lightly pressed around the plant. Seedlings of each cross were kept together in the one bed.

Although they arrived in a dry state, the compost having been removed prior to shipment, they started to grow new roots four or five days after planting.

We commenced our watering programme the day after the plants were in the ground. A heavy watering of about two inches was first made and this was followed a couple of days later with another application. Fertilising was commenced about one week after planting with "Nitrophoska", a German product, water soluble which has a Nitrogen, Phosphorus, Potassium ratio of 13-13-20, applied at the rate of 3lb. to 100 gallons of water, by spraying on to the leaves of the plants. A day after the fertiliser was applied the plants were given a heavy application of water.

The nutrient level was kept high during the growing season. On the ground beds, application of dry Nitrophoska at the rate of 3-4 lb. per 100 sq. feet was made every 30 days. Watering was carried out twice a week; first an application of one inch and later two inches was made. It is important to heavily water after fertilising. It is also important to only moderately withhold water from the plants during the winter period. Under the system of

bed culture the plants have made rapid progress. As many as eleven growths have been made from a single bulb plant in a month. It will be interesting to observe the flower production from the new growing technique next September.

The house required for the smaller seedlings was imported from Cambridge Glasshouse Co., England. The building is 60ft. by 157ft., consisting of two bays each 30ft. wide. It has ventilation completely along both sides of the ridge and the side walls. This type of house is excellent, as free movement of air is essential for robust growth of seedling Cymbidiums. Wire benches supported on galvanised tubular steel frames have been used.

The potting compost consists of German Peat Moss 60 per cent, new leaves 30 per cent and sheep manure 10 per cent, mixed by a Lindig soil mixing machine. Superphosphate was added at a rate of 11lb. to 100 cubic feet. The compost was then thoroughly moistened and turned on several occasions.

The seedlings were two inches to four inches high and had been growing in flats, nine inches by eighteen inches. These were divided on arrival in Australia and were held in the ground beds for two or three weeks until they were potted. When the plants were lifted it was surprising to see the root activity that had taken place over the few short weeks. This, of course, required care in potting as the new root tips could easily be damaged. The plants were potted into three inch pots. No crocks were used in the pots and only light pressure was applied as tight potting is detrimental for prevalent root growth and does not allow good aeration. After potting, the plants were placed in a glass house on one inch wire mesh benches and were given an application of water. Two or three days later a mild solution of Nitrophoska ($2\frac{1}{2}$ ozs. to five gallons) was sprayed on to the leaves, and the plants were again watered two days later. Fertiliser solution made from Nitrophoska was applied to the plants at weekly intervals with the aid of a proportionator. Watering was carried out twice weekly, once prior to fertilising and a day or two later, each application being two inches. On no account were the plants allowed to become dry as this will cause burning of the roots.

The watering of two inches varies with the pressure and the type of sprinkler used, but would generally take one hour. These small seedlings have made extremely rapid growth over the last ten months and are now from

10 inches to 15 inches high.

The shading on the roof of the glass house containing the small seedlings was rather sparse during the winter months, a light spray of emulsion paint only was applied; however, as the summer period advanced it was necessary to cut down on the light intensity, and further sprayings of emulsion paint were made.

For the culture of larger Cymbidiums in pots we recommend that the plants be watered with a liquid fertiliser; a proportionator is a very useful system for speedy application. The solution should be made up containing 2lb. to 4lb. of fertiliser to 100 gallons or approximately 1oz. to one gallon and applied once a week. The plants should be watered prior to fertilising and again a day or two later according to weather conditions. For example, a weekly programme would be carried out as follows:

The plants would be watered on Monday with the equivalent of one inch of rain. An application of Nitrophoska made on Tuesday, and the plants again watered on Thursday with a heavier application, say, two inches. On no account should the plants become dry, as this will cause damage to the root system because reverse osmosis takes place, that is, instead of the plants taking in moisture and fertiliser from the compost, the salts in the compost take out moisture from the plants. A regular spraying programme has been followed at our nursery every two weeks since our initial planting. A mixture of spray has been used as it is not possible to obtain a complete control of insect pests and fungus diseases. The main pests attacking Cymbidiums are red spider, aphid and thrips. Control of these is achieved by the use of malathion combined with D.D.T. The mixture is necessary as thrips are controlled by D.D.T. Isothane Q15 is specially recommended for the control of fungus diseases attacking Cymbidiums, and we have been adding this to our D.D.T.-malathion mixture. When the plants come into spike and the buds emerge from the sheaths, the water soluble spray is not recommended as the modern wetting agents spoil the buds. A dust can then be used.

After eleven months of growing under this system the majority of the single bulb plants have bulbed up and have made numerous growths; many have now two to three flower spikes developing. With the same soil conditions and programme we feel sure that many more growers could adopt this easier cultural method.

—South Creek Road, Dee Why, N.S.W.

Orchids in a Miniature Glass House

B. M. CARDWELL

● If you are an enthusiastic orchid grower, you are probably keen to add variety to your collection by growing additional genera. In and around Sydney, at least, quite a good selection of plants can be grown in a bush house, but there are, of course, many others which require a glass house for best results, and perhaps also heat in winter.

Unfortunately, to build a glass house, and heat it, costs quite a lot of money, so that many keen growers have to content themselves with bush house subjects.

But perhaps a Miniature Glass House is the answer? It is easy to build and very cheap, and does not require much space.

My "glass house" is six feet long, four feet high and two feet six inches deep. It stands on legs about six inches high and is in one corner of the bush house. In this small glass house (which is really a glass box), I am growing over thirty-six plants, and they are growing very well.

The house is electrically heated, with thermostat control, to maintain a minimum temperature of approximately 60 degrees F. throughout the winter, but the cost for current consumed is estimated at not more than £3 to £4 per year.

Just on two years of successful operation have proved that there are no great troubles to be encountered, although before construction I wondered if I could successfully heat a glass house (box) when it was to stand out in the cold winds of a Sydney winter, and also how plants would fare during summer in such a small and presumably hot box. All these fears have proved groundless and the operation of the house is really extremely easy. I now feel that I can safely recommend a similar house to any grower, at least in the Sydney area.

Description. The frame is of wood, with fibro sheets for the back and base, the base by the way being well supported to take the weight of the contents. It has windowlite sides and top, and the front is a glass sash made to slide up and down to permit access to the plants. The top is hinged so that it can be opened up for ventilation and is set at an angle in order to shed rainwater.

There are two flaps at the base running the length of the box, one in the front and one at

the rear to admit fresh air. Both the bottom flaps and the top can be adjusted to various openings.

So much for the box itself; now inside, about eight inches from the base supported on blocks of wood, are two trays side by side. They are made of galvanised iron with sides about one and one-half inches high and are usually more or less full of water to provide a humid atmosphere. The bottom ventilating flaps are below these trays and there is about three inches space all round, between the trays and the sides of the box, to allow the fresh air entering at the base to rise up through the box.

The plants rest on old ice chest shelves placed over the trays.

Heating. The electrical heating system is quite simple—I have two 500 watt covered strip resistors, each about eighteen inches long, which are connected in "series" and controlled by a "Satchwell" Greenhouse type thermostat. One of the new type resistors enclosed in pipe, as used fairly widely for glass houses, would be satisfactory, providing it was of sufficient heating capacity.

It is quite possible that one 500 watt resistor or even less would be sufficient, but I have not bothered to experiment as I would not save any current by having smaller resistors. The larger ones simply bring the temperature up to the required level more quickly and then switch off. The thermostat itself is, of course, placed just above the plants, while the resistors are at the bottom of the box underneath the water trays, with a piece of galvanized iron (properly earthed) over them to prevent excess water from the hose splashing on to them. However, the type of heaters I have used are completely metal covered, the covers themselves are earthed and they are therefore quite safe. Your electrician will, of course, look after such details for you. This electrical arrangement has maintained the temperature in my box at approximately sixty degrees even on the coldest night.

The ends and top of the box are made doubly simple by putting windowlite on both the inside and outside of the timber composing the frame, so that there is a pocket of air imprisoned between which acts as insulation and prevents loss of heat. This appears effective, for I notice

in the mornings that although there is condensed moisture on the glass in front there is not any on the top or sides.

One of the secrets of cheap heating is, of course, not to lose the heated air and so the top of the box should be a reasonably good fit when closed, but it is not so important with the bottom fittings and in my box there is plenty of space between the base and the back for surplus water to run out when hosing the plants.

Operation. Throughout the warmer weather the ventilation flaps and the top are left open day and night. During the winter I close down one of the bottom flaps completely and on winter days leave the other bottom flap and the top open an inch or so, according to the weather. But on winter nights the box is completely shut up.

Probably a fair proportion of the current I use is consumed between, say, 8 a.m. and 9 a.m. and between 4.30 p.m. and 6.30 p.m., as I open the ventilators before leaving home in the mornings while the outside temperature is still low (say, forty-one degrees) and they are not closed until I arrive home at night about 6.30 p.m. when the temperature has usually fallen again. A big saving in current would probably result if the ventilators were attended to at more suitable times.

The heat of summer has not presented any great problems, the box stands in the bush house and has the lath roof over it, also the double windowlite on top and sides helps to break the sun's rays. In the middle of summer I have provided additional shade by means of a piece of hessian tacked to the bush house roof directly above the box. Even with this additional shade the plants get plenty of light, more I think than in many glass houses, for the glass front is entirely clear with no paint or white-wash on it winter or summer, although it faces directly north.

I find the temperature in summer may go a little higher than in the bush house, but feel that the humidity provided by means of the trays helps considerably to prevent damage to the plants.

The cost for the electrical equipment would be approximately £14 and the box itself I made mainly from spare material at hand, but I think the necessary timber, etc., could be purchased for not more than £10.

That is very cheap for an electrically heated glass house, even if it is not very big. Anyhow, I sometimes think that about three dozen plants

is a very satisfactory number to have. With that number every plant can be treated as an individual and its progress watched and enjoyed. It is possible to have too many plants to attend to, if your time is limited.

—71 Webb St., Herne Bay, N.S.W.

• *SOUTH AUSTRALIAN SPRING SHOW.* The Club's Spring Show was held, as usual, in the Liberal Club Hall on September 16th, 17th and 18th, and the attendance figures were quite satisfactory—an improvement on those of last year. The temperamental cymbidium family decided to flower later this year; consequently, spikes of cymbidiums, which form the backbone of the Spring Show displays, were scarce. It is evident that some thought will have to be given to holding this show a week or maybe a fortnight later.

Nevertheless, with the help of many miscellaneous genera contributed by the growers, together with a liberal supply of foliage plants, quite a decorative effect was obtained.

First class cymbidiums were few in number, the committee giving the blue ticket to Louis Sander 'Kirribilli' grown by Mr. N. Christoph. Other attractive plants noticed in the various displays included Judge Markell 'Jean', Swallow 'Autumn Tints', Gossoon 'Red Breast', Eagle 'Elizabeth Ann', Cassandra 'Snow Queen', Joyance 'Cinnamon', Drucilla, Girahween 'Gloria' and Ramboda 'Adonis'.

Cypripediums were quite numerous, evidencing once again what a long flowering season they have, only being cut down by the first warm days of September. The winning slipper was a shapely Utopia shown by Miss I. Thomas. Other attractive cypripediums included Kirksley 'Samson', Tearlath 'Goliath', Holdenii, D. Clarke, Golden Emblem and Emerald Star.

Cattleyas and allied genera, never plentiful, were nevertheless represented by some attractive flowers, the coveted blue card being placed on a plant exhibited by Mr. W. Harris—Cattleya Bow Bells, which should be even better when flowered on a larger plant.

As mentioned before, the miscellaneous genera were well represented and gave those who had to award the blue ticket for this class a difficult job. The eventual winner being a fine plant of Lycaste Skinneri carrying twenty-three flowers grown by Mr. F. De Rose; this plant gaining a narrow verdict from a very floriferous Angracum on the stand by Mr. A. D. McAllan.

Cypripediums

R. E. TRENERRY

• In my official capacity as Librarian with the Orchid Society of New South Wales, I often have requests for books or other information regarding Cypripediums. Considering that Cypripediums have been grown and hybridised in England, Europe and America for nearly one hundred years, it is surprising that there is not one book dealing chiefly with the genus as with Cattleyas and Cymbidiums.

In these countries Cypripediums are extensively grown and are extremely popular, especially as indoor plants, because the foliage is attractive even when not in flower; the flowers last at least two months providing they are watered regularly. Cypripediums are extremely hardy, easy to grow and are free from disease.

The family originates in quite a few countries, chiefly Europe, America and Asia, but it is mainly the Eastern varieties and their hybrids that are grown. The Eastern varieties mostly come from India, Burma, Indo-China, Philippines, New Guinea and Malay Peninsula. The species that have been used extensively for hybridisation are *insigne*, *villosum*, *Spicerianum*, *barbatum*, *callosum*, *Fairieanum*, *Charlesworthii*, *bellatulum* and *niveum*.

There are quite a lot of different species and there are people who prefer a collection of species to a collection of hybrids as they are generally smaller, more dainty and, some people say, "have more character than hybrids."

The hybrids, to me, are much more interesting as they are larger, the colours are improved, larger range of colours and they are much easier to grow and flower (apart from *insigne* and its varieties *villosum* and *Venus-tum*).

Hybrids can be divided into two groups—mottled leaf and plain leaf. The former generally require more heat than the latter, though under conditions which suit both they can stand quite a reasonable amount of coldness.

One reads from overseas' orchid journals about maximum and minimum temperatures, and never to let the temperature fall below 50 degrees in winter; probably under their conditions this is quite necessary.

I find Cypripediums grow quite well under bush house conditions, but they need more shade than Cymbidiums—I grew Cypripediums with Cymbidiums on the south side of their

large pots for the foliage of the Cymbidiums to give the extra shade needed, and with quite good results. Under a glass roof, fairly low and flat with lattice on northern and eastern sides, I found results much better. I have corrugated asbestos sheets for benches, covered with old tan bark, on which I stand the pots. The old tan bark is always wet from watering and even if the plants have not been watered for a week it is still wet. This helps to create moist, damp conditions so necessary for good growing.

Potting mixtures vary a lot, the same as with Cymbidium mixtures, and in the past I have had good results with coarse tan bark, small charcoal and a little bone meal, but the main drawback was the mixture rotted down to mud in the bottom of the pots after twelve months, and if plants were left two years the lower roots generally rotted. Whilst the growth the second year was usually better than the first year, the root system deteriorated. Overseas they have this problem also. Plants I purchased in a compost of tan bark, leaf mould, coarse sand and old cow manure became too wet under my summer watering and too dry under my winter watering. Fibre and tan bark also held the water too much. I experimented and found bulb fibre lasted two to three years and I am at present using this plus a little hoof and horn meal, which is a mild fertiliser and takes a long time to break down. The results have been very interesting and some of the growth extremely good; most new growths are larger and stronger than previously, while in quite a few cases plants have made more than one growth. Further, I have reduced watering to every second day except in extremely hot weather, when I may give a light sprinkle overhead at night.

Watering: Cypripediums must never be allowed to dry out as they have no bulbs or canes in which to store food or moisture. Watering after plants have finished flowering and before buds start to appear can be done overhead with a fine spray, but after buds appear it is better to water around the pot, otherwise the buds may damp off. I find watering daily or as required spring, summer and autumn, whilst in winter when my temperature falls as low as 30 degrees I water only once a week on Sunday

mornings about 9 a.m. to allow the house to warm up and to allow all frost to disappear.

Under these conditions even the mottled leaf plants grow and flower, but not perhaps as freely as they would do with a little more warmth.

Regarding potting, always use the smallest pot that the plant will fit into without cutting or damaging the roots. Always give good drainage. There is nothing to gain by over potting, as with *Cymbidiums*, as the plants will go back, and unless it has a lot of root or is a specimen

plant a four to six inch pot is quite large enough.

I am sure if I can grow *Cypripediums* under my conditions, anyone else can do just as well. I find with cold growing, once the plants become acclimatised, they do just as well as those grown under heated conditions; in fact, the leaves stand up better than on plants that have been grown too softly with too much heat, although the flowers may be slightly smaller.

—"Tremorva", 24 Murray Street,
Lane Cove, N.S.W.

Never Re-pot a Cattleya

J. SHAW

• It is approximately thirty years since I became interested in orchids and started growing cattleyas. It is nineteen years (March 1939) since I wrote an article for this Review entitled "Blister Culture". It has been quoted and copied by many surrounding growers, and was mentioned by the late Murray Cox in his Cultural Table of Orchidaceous Plants.

Two articles in the Review, March issue, concerning the potting of cattleyas in osmunda fibre and tan bark by Messrs. S. G. and A. J. Bell respectively, impel me to once again put pen to paper and air my views, which may be of benefit to young growers. No doubt these gentlemen have had experience, each in their own sphere, and without wishing to be controversial, I say here as I have always said—never re-pot a cattleya. How would you like to be uprooted and have to re-establish yourself every two years in new surroundings without any anchorage? Cattleyas don't like it either. For instance, take a back cut off your plant and reset it; you are very lucky if you get it to flower reasonably well in two years. A few will, the majority will not. Cattleyas, of all orchids, are true epiphytes, as are dendrobiums. They grow *on*, not *in*. I never plant a cattleya—I mount them. Clay pots are the poorest container for these orchids ever designed. In their natural state they do not grow on burnt clay or bare rock, but always on something vegetative such as rough tree bark or fibre, tree ferns, etc., where their roots, all exposed, can wander at will in search of what they require, and also provide a firm anchorage against all the winds that blow.

These roots will never delve into anything deep, dark or soggy. Pots get too cold in winter—too hot in summer—they dry out too quickly

and are not in any way in affinity. So why not use common sense and follow nature in providing something vegetative like wood, tree fern, or blocks of fibre. I am enclosing photos which the Editor may see fit to publish, to emphasise my point. The root growth, pictured, can be seen by any enthusiast. Some have been in these blisters undisturbed for twenty-five years—they are established and *flower* and they will stay there for another twenty-five years as far as I am concerned. If they grow across and down the side, let them; if you want a back cut tear it off, but don't disturb the growing lead if you want strong established flowering plants. Put the knife through on strong plants every two bulbs; on weaker ones every three bulbs and make them work. I have some with nine and ten leads this way. They flower over a long period, leads in various stages succeeding each other.

They are the easiest of all orchids to grow, the hardest to kill unless you bury their roots in some damp, dark and soggy compost, then they will sicken quickly. They will stand a wide range of temperature providing when cold they are reasonably dry, and when hot they have plenty of moisture, and at all times plenty of light.

My temperature has been down in winter at 6 a.m., frequently to 36 degrees, and during a heat wave up to 100 degrees — all without harm. I am convinced that if gradually acclimatised they will stand frost. I have had lantana burnt black by frost only fifty feet away from my glass walled open batten topped bush house. For containers I am still using blisters (these are the hollow protuberances found on logs), and secondly blocks of tree fern. Lately I have been able to obtain a good quantity of *Todea*

barbara. This is softer than hard black *Todea* and is obtained in blocks which grow in our coastal swamps, and for me is ideal; just wire two pieces together with the back cut wedged between and they will go right ahead. Out of some four hundred-odd cattleyas I have not more than twenty in pots, and that only because they were established when acquired and I was loath to disturb. If your compost breaks down as *osmunda* and tan bark do, you have to re-pot, with the result that the plant is so busy re-establishing itself that it has no time to flower. Cattleyas definitely do better when hung up where the air can get all around and

underneath them and slugs, etc., cannot attack.

In conclusion, I should state that I am on the sea front, two hundred yards from the ocean, and get a fair bit of moisture from the sea. The last few years I have taken to feeding with improved results. During the growing period, a weekly spray with aquasol and fairly strong liquid cow manure alternately. Every six months a teaspoon of blood, bone and super scattered around their base, which I think is to their liking.

—"Iluka", Goodwin Terrace,
Burleigh Heads, Qld.

Around Australia

• *PARRAMATTA AND DISTRICT ORCHID SOCIETY*:—Sustained applause greeted the President, Mr. A. J. Webb, of the Parramatta and District Orchid Society, when he announced at the October meeting that a modern and adequate home had been secured for the Society. The growth of population in the district has out-stripped hall space, and almost since its foundation in 1950 the Society has been struggling to find accommodation for its increasing membership.

Now, members are able to drive their cars up a ramp to the roof of the new wing of Grace Bros.' building, walk a few steps, and seat themselves in a hall which is the last word in comfort and convenience. There was a gasp of astonishment, then another round of applause when Mr. Webb added that the firm had given the Society the use of the hall for its monthly meetings, with additional space for its Annual Show, free of charge as a gesture of goodwill.

As there are seats for two hundred and thirty-five members, and parking space for two hundred cars, the Society will be well provided for, even in the golden age when every orchid grower has a car for himself and another for his wife.

At the Spring Show, old rivals in Dorchester 'Jeanette' and Balkis 'Luath' won the principal awards at the Parramatta and District Orchid Society's Show. Dorchester 'Jeanette' gained the Grand Championship by what appeared to be a narrow margin from Balkis 'Luath', Reserve Champion. Both these well-flowered plants were exhibited by A. M. Cook, who, with Eagle 'Elizabeth Ann' as his third in a notable group, also won the class for three dis-

tinct varieties. Mrs. P. Daniels was second in this class, but was first in the class for the best presented exhibit of cymbidiums.

The late season kept some award varieties out of the show, but standards were well maintained in form, colour and diversity of exhibits.

In the colour section, G. Lynch showed the best yellow, Lucy 'Brown's', adjudged also the best coloured cymbidium of the show. The best green was Esmeralda (Mr. Layman), and the best red was Faust 'Flambeau' (Dr. B. R. Morey). The award for three distinct colours went to Mrs. P. Daniels with Veda Sunset, Minivet and Erica Sander 'Sailor Bay'.

A feature of the show was the display of orchids and foliage plants. The sash went to A. J. Webb for a large exhibit glowing with tropical colour, set against the tenderest greens. A. Yee was a creditable second.

The best specimen cymbidium was Morvyth (K. Hopkins). The lady members' class was won by Mrs. P. Daniels with Swallow 'Soulangiana', and Mrs. Layman was second with Ispahan 'Mascot'. Mrs. W. Woods showed the best decorative with Miranda 'Maisie', and S. Charlier was second with Charm 'Elegance'. The best shoulder spray was made by Mrs. G. Griffiths, and the second best by Mrs. H. Charnock. Special mention was made of an extensive non-competitive display staged by S. A., R. E. and S. Batchelor.

The best native orchid was *Dendrobium Remulum* (K. Wilson), and the second best was *Dendrobium Speciosum* (Master Philip Jeffery). Best *Cypripedium*, Mary Thom x Mars (A. Yee); Best *Dendrobium*, Nobile 'Sir F. Moore' x Reginum (S. Mills); Best



CATTELEYA CULTURE AS ADVISED BY Mr. J. SHAW, QUEENSLAND

See this issue "Never Repot a Cattleya". Perhaps southern States may envy the Queensland climatic conditions where this culture takes place in a lath house.



CYPRIPEDIUM PADDY JOE 'BELVEDERE'

A.M. O.S. of N.S.W. Ltd. 1957. Owner, Mrs. J. Bell. Natural size across petals $4\frac{1}{8}$ inches. White dorsal, white and mahogany petals. Reg. No. 348.

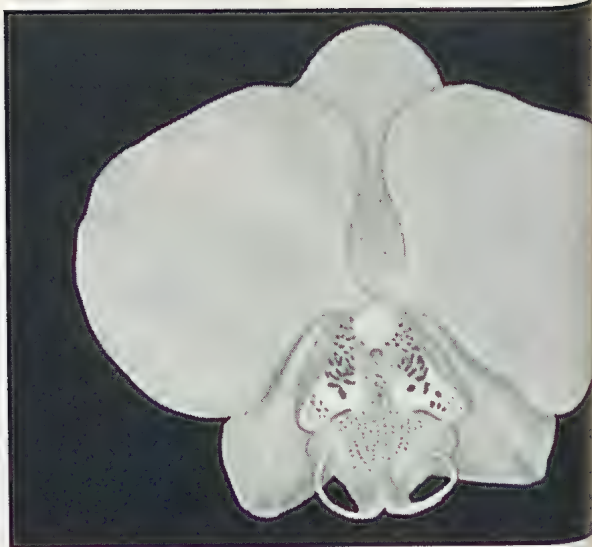


ZYGOPETALUM MACKAYI

Sepals and petals greenish shade spotted with chocolate brown. The lip is white and is veined with bluish lines. Bush house culture in and around Sydney area.

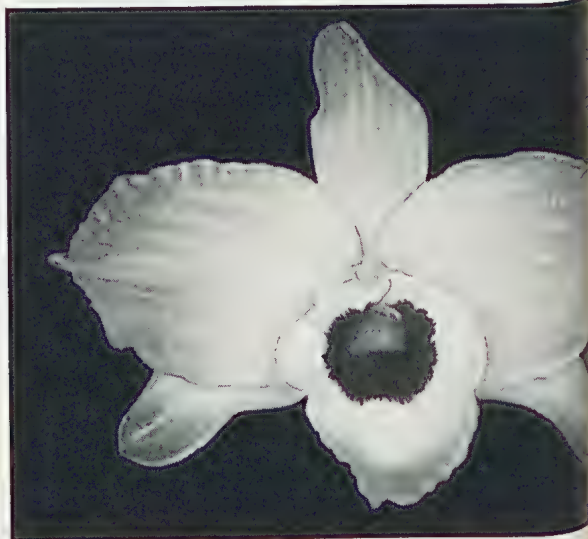
PHALAENOPSIS REVE ROSE 'RAPALLO'

*A.M. O.S. of N.S.W. Ltd. 1957. Owner, J. Chapman.
Natural size across petals 3 inches. Pink sepals and
petals, lip pinkish with reddish spots, a lovely
round flower. Reg. No. 351.*



DENDROBIUM MODEL 'JUNE'

*H.C.C. O.S. N.S.W. 1957. Reg No. 355. Owner,
L. Sasso. Natural size across petals, 4 inches Colour
Orchid purple. Best Dendrobium at N.S.W.
Orchid Festival.*



CYMBIDIUM FASCINATION 'REGAL'

*A.D. O.S. of N.S.W. Ltd. 1957. Owner L. Giles.
Natural size across petals 3 inches. Granted an Award
of Distinction for brilliant red colour. One of
several Fascinations to gain this award for Mr. Giles.
Reg. No. 349.*



Cattleya, Margaret Heiss (S. Mills).

Results in Novice Sections: Best Cymbidium—J. Saville, 1st; R. Green, 2nd. Best Red—R. Miller; Yellow—J. Saville; Green—Mr. Balfour; Miscellaneous—A. Marks, 1st; G. Lynch, 2nd.

• **HORNSBY-KU-RING-GAI ORCHID SOCIETY**:—The Annual General Meeting of the Hornsby-Ku-ring-gai Orchid Society held at the Memorial Hall, Killara, proved one of the most outstanding in the history of the Society. A large attendance of members was treated to an interesting report from the President (Mr. D. W. Hardie) on the activities of the Society over a most successful year. The progress of the Society is indicated by the holding of the meeting in the main hall, made necessary by increased attendances and the enthusiasm of members in bringing along plants for exhibition.

The display of orchids at the meeting was worthy of a Spring Show and was much appreciated by all present.

The President extended a warm welcome to the Deputy Town Clerk, Mr. Newton, who represented the Council at the meeting.

Election of Officers for the year 1957-58 were as follows:

President—Mr. D. W. Hardie, "Timberlea", Congham Road, West Pymble.

Hon. Secretary—Mr. R. J. Jamieson, "Yilleena", 35 Babbage Road, East Roseville.

Hon. Treasurer—Mr. H. Ludowici, 4 Carisbrook Street, Lindley Point, Lane Cove.

The Mayor of Ku-ring-gai, Ald. A. N. Campbell, officially opened the Hornsby-Ku-ring-gai Orchid Society's Annual Show held at the Killara Memorial Hall on August 16th and 17th.

The Society's President, Mr. D. W. Hardie, won the sections for the Champion Cymbidium of the Show, Best Cymbidium for Colour, and Champion Cymbidium for Members Only, with his Cymbidium Swallow 'Lemon Beauty'.

An outstanding feature of the Show was the display of orchids and foliage plants by well-known grower Mr. Leo Giles.

Results in the various sections were as follows:

Open Section:

Champion Cymbidium—D. W. Hardie's Swallow 'Lemon Beauty'.

Reserve Champion—L. Sasso's Eagle 'Elizabeth Ann'.

Best Specimen Plant—Mrs. F. G. Spurway's *Angraecum*.

Best Cymbidium for Colour—D. W. Hardie's Swallow 'Lemon Beauty'.

Group of Three Cymbidiums—L. Sasso, 1st; S. G. Cooke, 2nd.

Group of Three Cymbidiums for Colour—H. French, 1st; L. Sasso, 2nd.

Group of Six Decorative Cymbidiums—J. Preece.

Best Cypripedium—Mrs. J. S. Bell.

Best Orchid not otherwise specified—Mrs. F. G. Spurway.

Members' Section:

Champion Cymbidium—D. W. Hardie's Swallow 'Lemon Beauty', 1st; Mrs. F. G. Spurway, 2nd.

Best Cymbidium for Colour—J. Preece, 1st; H. D. Lanceley, 2nd.

Group of Two Cymbidiums—D. W. Hardie, 1st; Mrs. J. Taylor, 2nd.

Group of Three Cymbidiums for Colour—D. W. Hardie.

Best Orchid not otherwise specified—K. Kelaher.

Display of Foliage Plants, Ferns and Orchids—D. W. Hardie, 1st; Mrs. T. Argles, 2nd.

Novice Members' Section:

Best Cymbidium—Mrs. Creswell, 1st; W. A. Robins, 2nd.

Group of Two Cymbidiums for Colour—A. W. Smith, 1st; D. W. Hardie, 2nd.

Best Orchid other than Cymbidium—B. Levick.

• **MANNING RIVER ORCHID SOCIETY**:—Meetings are held in the staff room of the Commonwealth Bank on the second Friday of each month. Subscription rates are 10/6 for each member or 15/- for married couples.

Messrs. R. Dowling and G. Coleman interested members at a recent meeting with colour transparencies of local orchids. This new Society is indebted to Mr. Frank Slattery for his kind donation of orchid books.

• St. George Orchid Society President, Mr. H. R. Crutch has been elected Chairman of Directors of the newly formed Australian Orchid Growers Trading Co-operative Society, which has been formed principally to export flowers to America and other countries on behalf of orchid growers throughout N.S.W. Hon. Secretary is Mr. F. Thresher, 38 Amos St., Westmead, N.S.W.

• *SYDNEY ORCHID SOCIETY*:—The Spring Show, 21st and 22nd September, 1957, was held in the St. John's College at Lakemba.

The Saturday morning dawned clear and bright, and augured well for the Society. This was the first time for many years that the annual show was not held at Marrickville Town Hall.

From the results of the attendance the show was a success and justified the committee's effort; the many members and friends who attended were well rewarded by the beautiful display of orchids and foliage plants.

As was to be expected, there was a preponderance of cymbidiums; the miscellaneous orchids that were displayed were of a high quality.

Grand Champion of the Show was awarded to Mrs. Adams for her beautiful plant of Dorchester 'Jeanette'. First Reserve Champion, Mr. Pearson with Balkis 'Luath', which could not have been very far behind in points. Second Reserve Champion, Mr. S. Cooke with Princess Astrid 'Dorothy'. The Best Coloured Cymbidium of the Show went to Mr. A. Chalmers, with a seedling, Robin Redbreast, flowering for the first time. Mr. A. Begg, a senior Judge of the N.S.W. Orchid Society, later in the year in a lecture at the St. George Society, described it as one of the two best new cymbidiums shown in the State this year. The shape excellent and the colour a bright red.

A special prize was donated by Mr. R. Mead for the most attractive cymbidium in the open and novice sections. Mr. Fred Moulen was asked to select the winners: he selected four plants from the open section and they all turned out to be Mr. R. Mead's—no one could take the prize away from him. In winning his own prize, Mr. Mead, who is the Patron of the S.O.S., donated the prize of £10/10/- back into the Society funds.

The best three cymbidiums went to Mrs. Malone, with Princess Astrid 'Dorothy', Dorchester 'Jeanette' and Balkis 'Luath'.

The best two cymbidiums went to Mr. Pearson; Dorchester 'Jeanette' and Balkis 'Luath', with Mr. Mead 2nd.

Best three for colour, Mr. C. Wilson 1st; Mr. E. Hayes, 2nd.

Best six decorative, Mr. R. Mead 1st and 2nd.

Best cymbidium for export, Mr. R. Mead.

Best Native, Mr. Hayes, also Best Other Orchid.

Best seedling, Mr. Chalmers, Robin Red-

breast; Mr. Les Randells 2nd.

A new feature was a 6ft. x 4ft. exhibit won by Mr. Foy Bassett with a very charming exhibit of foliage plants and orchids. All plants exhibited by this grower were in first-class condition and well deserved the first prize, which was the American Orchid Society Silver Medal.

In the Novice and Members' section, Mr. G. Williams was a very successful exhibitor, taking out two first prizes and a second prize. Mr. E. Hayes in the Open and Members' section gained one first and two second prizes. One cymbidium being a particularly good orchid, Swallow 'Kingsford', well flowered, a beautiful strawberry colour. Mr. A. J. Smith won the best two cymbidiums in the Members' Section, also in the Members' Section Mr. J. Jannese, the President, was successful in the Best Three Decorative Cymbidiums.

As usual, Mr. Frank Slattery supported the Society with a very lovely exhibit of cymbidiums, miscellaneous orchids and foliage plants. A very beautiful plant of Madder Rose 'Sailor Bay' stood out, a soft suffused pink glow, and the background of green foliage made it a most attractive sight. Two large plants of Nubian 'Golden' and Poyning's Bronze with three spikes each made an attractive centre piece. On each side of them were Balkis 'Luath', Adele Sander 'Narcissus' and Balkis 'Elouera', and other cymbidiums; these in turn were augmented by cattleyas, cypripediums and anthuriums, and around the base of the exhibit were many types of ferns and crotons. In between the plants was packed with green moss. The exhibit created great interest amongst members and friends present.

Mr. Mead, on the last day of the Show, auctioned spikes of flowers and corsages, which were made up by the ladies.

The Society wishes to thank all those members who contributed to make the Show a success.

At the Annual General Meeting the following office bearers for 1958 were elected:

Patron—R. Mead.

President—R. Brady.

Vice-Presidents—J. Jannese, J. Ford.

Hon. Secretary—B. Schwartz, 1178 Forest Road, Lugarno. LF9708.

Hon. Treasurer—J. Swinbourne.

Librarian—M. Brown.

Committee—A. Chalmers, N. Graham, W. Green, F. McCullum, J. Newman.

New Orchid Hybrids†

NAME	PARENTAGE	FLOWERED BY
<i>Continued May, 1957.</i>		
Dendrobium Lewalani	gouldii x Anouk	R. T. Kami (Kodama O.N.)
" Lillian Aping	Vera Shibata x taurinum	D. C. Ai (M. Miyamoto)
" Lois Won	Bellflower x Grace Goo	F. "Wichman (A. Elle)
" Marie Elle	biggibum x Artur Elle	H. Kushima
" Nalani	Jaquelyn Thomas x taurinum	Y. Abe
" Palolo	Elaine Abe x May Neal	Kodama Orchid Nursery
" Royal Rose	Caesar x Lady Constance	W. Komatsubara (Y. Inouye)
" Tusco	toftii x Johannis	A. C. Chang
" Velma	Dark Victory x Takami Kodama	R. & T. Okubo
" Waimanu	stratiotes x Lady Constance	S. R. Fouraker (Snyder)
Laeliocattleya Gladys Millner	C. Barbara Billingsley x L. harpophylla	L. H. Westenberger
" Mem. Joseph C. Westenberg	Joseph Hampton x Trails End	Sykora's Orchid Farm (Fields Orchids)
" Lew Sykora	Cynthia x C. Maggie Raphael	H. Patterson
" Memoria Louis Hoebel	Jay Markell x C. Oritani	Clarelen Orchids
" R. P. Metz	Trempealeau x C. Monona	T. Ogawa-Orchids
" Samhecuva	Sam Houston x Hecuva	Dr. W. Stirling
Odontioda Barlow Fold	Gerargia x O. crispum	" "
" Claengart	Avala x Cooksoniae	" "
" Drumsuie	Avala x A. G. Ellwood	" "
" Memory	Florence Stirling x O. Adonia	" "
Odontoglossum Basades	Cades x Bassanio	Stuart Low
" Bounty	Bepton x The Squire	Dr. W. Stirling
" Dinwoodie	Ascarry x Elise	Stuart Low
" Loup	Miramar x crispum	" "
" Petris	crispum x Petworth	" "
Odontonia Marin	Milt. Bleuana x O. Pedrito	F. W. Gamble
Oncidium Agnes Ann	tetrapetalum x triquetrum	R. & T. Okubo (W. W. G. Moir)
" Bud Brown	triquetrum x cheiroporum	W. W. G. Moir
" Kuwon	Java x forbesii	K. Kugust
Opsisanda Juliet Kimball	Vandopsis gigantea x V. sanderiana	R. Yahiro (E. T. Iwanaga)
Phalaenopsis Admiral Stump	La Canada x Wilhelmina Tenney	Mrs. Lester McCoy
" Awapuhi	Manoa x Atala	O. M. Kirsch
" Katherine Kida	Atala x Summit Snow	R. Fujio
" Rose Jewel	schilleriana x Poamoho	Stuart Low
" September Morn	Pink Cloud x Marmouset	Mrs. Lester McCoy
" Snow Princess	Gladys Lovelace x Wilhelmina Tenney	" " "
" Sun Princess	Rothschildiana x Pink Sunset	" " "
" White Goddess	Katherine Siegwart x Wilhelmina Tenney	" " "
*Rodricidium Twyla	Onc. tetrapetalum x Rodriguezia secunda	R. & T. Okubo (W. W. G. Moir)
**Schombopidendrum Crispa-Glow	Schomburgkia crispa x Epidendrum Orange Glow	W. W. G. Moir
Sophrolaeliocattleya Princess Grace	His Majesty x C. Empress Frederick	D. Ryerson
Vanda Alexander Bowman	Honolii x sanderiana	Mrs. A. Bowman
" Celeste	Amoena x coerulea	O. M. Kirsch
" Cheerful	Boschii x Carol Hirano	Nakagawa O.N.
" Claire Nakagawa	Laukapu x sanderiana	" "
" Elizabeth McNeill	Boschii x Lucy B. Chandler	Mrs. A. Bowman
" John Hopkins Bowman	Tatrox x coerulea	" " "
" Juliana	Julia Sideris x sanderiana	J. S. B. Pratt
" Lillian May	Caroline J. Robinson x monacensis	O. M. Kirsch

Vanda Mary Katherine Bowman	Onomea x Rothschildiana	Mrs. A. Bowman (Dr. Nishimura)
" Naniloa	Kilohana x Rothschildiana	T. Ota
" Rulea	Ruth O. Pratt x coerulea	J. S. B. Pratt
" Saw Seng Kew	Cooperi x Ellen Noa	Lim Teik Ee

* This is the first recorded cross between a Rodriguezia and an Oncidium.

**This is the first recorded cross between a Schomburgkia and an Epidendrum.

June, 1957

Brassocattleya Pat	Princess Patricia x Mrs. Robert Paterson	Charlesworth & Co.
Brassolaeliocattleya Carnival	Frances Lamb x Lc. Mem. H. A. Tracy	Harold D. Wright
" Gold Star	C. White Christmas x Golden Myth	D. Ryerson
" Grand Slam	Calife x Lc. Canhamiana	Harold D. Wright
" Medallion	C. trianae x Malvern	D. Ryerson
" Trimomus	Bc. Trimabilis x Lc. Momus	Charlesworth & Co.
Cattleya Easter Glory	Jeanne Patterson x Sunrise Chalet	Lines Orchards
" Easter Morn	Margaret Hess x Ardmore	" "
" Anhanguera	harrisoniae x Souv. de Louis Sander	W. Silva
" Chevrolet	Mount Royal x Thurea	D. Ryerson
" Mary Blake	Veriflora x Maggie Raphael	Floyd K. Becker (T. Young Orch.)
" Mem Myrna White	Celia x mossiae	Rivermont
" Porto Alegre	mossiae x Sedlescombe	W. Silva
" Virginia Becker	Enid x Mary Blake	Floyd K. Becker (Lager & Hurrell)
Cymbidium Algo	Virgo x Albania	John Gibson
" Amboise	Doris x Cornette	P. F. F. Vacherot & Lecoufle
" Amiens	Matamore x Princesse Astrid	P.F.F. Vacherot & Lecoufle
" Bagdad	Gottianum x Babylon	Armcast & Royston
" Caerleon	Jessica x Capric	John Gibson
Cypripedium Aiko Yamamoto	Finetta x Yumedono	H. Yamamoto
" Godaime Chobei	Megantic x Ohyashima	C. Takeda
" Liege	Lemanii Ducis x Nancie Gamble	Dr. W. Stirling (A. J. Keeling)
" Yorkshireman	Blendia x Evanhurst	Mansell & Hatcher
Dendrobium Nolan	nobile x Bridge of Allan	Charlesworth & Co.
Laeliocattleya Abe Montague	Hertha x Princess Margaret	H. Patterson & Sons
" Admiral Courbet	Balzac x C. Luron	P.F.F. Vacherot & Lecoufle
" Aristocrat	Hyperion x C. Thetis	Rivermont
" Brown Derby	Glenferness x L. tenebrosa	Harold D. Wright
" Cotillion	C. Trimos x Miami	" "
" Crescendo	C. Admiration x Benson	" "
" Derby Day	C. Ardmore x Canhamiana	" "
" Dynamo	C. Rajah x Frank Lind	" "
" Elinor Isaacs	C. guttata x Elizabeth Lind	" "
" Jai Ali	Gertrude Paterson x Canhamiana	" "
" Lipstick	C. Pittiana x Canhamiana	" "
" Margate	Princess Margaret x Ludgate	Fields Orchids
" Medallion	Helen Wilmer x C. Trimos	Harold D. Wright
" Mercedes Pirazzi	Chithurst x Baldur	Fields Orchids
" Nan Peach	Sam Houston x Linneaus T. Savage	" "
" Pittsburgh	Lydia Johnson x Miami	Harold D. Wright
" Quinella	Jaquinetta x Canhamiana	" "
" Ruth Aronson	New York x Luminosa	Jo. Aronson (Lehigh Floral Co.)
" Slenderella	Theodora x L. Coronet	D. Ryerson
" Targate	Ludgate x Princess Ishtar	Fields Orchids
" Trend	C. Trimos x Frank Lind	Harold D. Wright
" Vogue	C. Trimos x Benson	" "
Miltonia Alësia	Etendard x Piccadilly	P.F.F. Vacherot & Lecoufle
" Alger	Pandora x Etendard	P.F.F. Vacherot & Lecoufle

Odontoglossum Yorkshireman	Mary Seville x Aireworth	Mansell & Hatcher
Phalaenopsis Chief Tucker	Chieftain x Thos. Tucker	N. W. Curson
" Madeline Edling	lueddemanniana x Summit Queen	Dr. C. P. Schaffner
" Juanita	Chief Tucker x Grace Palm	Shaffer's Tropical Gns.
Potinara Carminetta	Dorothy x Lc. Golden Gleam	Dr. W. Stirling
Vanda Belle of Singapore	Trots x Ellen Noa	T.M.A. Orchids
" T.M.A.	sanderiana x Trots	" "
July, 1957		
Aranda Moscudder	Arachnis flos aeris syn. moschifera x V. Frank Scudder	B. G. Miwa
Brassocattleya Loisland	Lois Ryerson x Hartland	Fields Orchids
Brassolaeliocattleya Anne Thomas	Lc. Governor Gore x Dawn Angela	" "
" Charles L. Steel ..	Bc. Mrs. Robert Patterson x Lc. George Baldwin	Col. Chas. L. Steel
" Golden Touch	Malvern x C. Maggie Raphael	Fields Orchids
" Hazel McCoy	Frioma x Lc. Edith Follett	J. Milton Warne
" Janette ..	Nanette x C. Janice Tanaka	(Mrs. Lester McCoy)
" Land of Lakes	Safran x Canari	B. Tanaka O.N.
" Mardelia	Marion Ryerson x Bc. Bedelia	Horticulture Flandria
" Marianne	Marion Ryerson x Lc. Red Oak	Fields Orchids
" Vallangela	Lc. Vallatar x Dawn Angela	" "
Cattleya Ampere	Mascotte x Trimos	" "
" Dora Flesh	Nelly Brands x Barbara Billingsley	P.F.F. Vacherot & Lecouffe
" Edith La Vere	luteola x Henrietta Japhet	Fields Orchids
" Elizabeth Griffin	Cades x Vanir	J. W. Williams
" Mirka	Louise Georgianna x White Empress	(Dr. O. W. Davidson)
Cymbidium Eyecatcher	Burnham x Nancy Harte	Truman Green
" Hazel	Crossbill x Swallow	(Rivermont Orchids)
" Mavis Pering	Butterfly x A. H. Barlow	Brookville Orchids
" Nansi	lowianum x Ispahan	R. Wallace Smith
" Woodalda	Woodhamsianum x Esmeralda	(M. E. McCreery)
Cypripedium Ano Nuevo	Cadina x Bordube	H. J. Edwards
" Black Scot	Roundhead x Black Thorpe	(Mansell & Hatcher)
" Las Pulgas	Tendresse x Libya	S. G. Scanes (Gibbs)
" Mendocino	Margaret x Farnmoore	H. J. Edwards
" Noyo	Paterglen x Haroun	(Mansell & Hatcher)
" Qualala	Selma x Clementine H. Churchill	Fred A. Stewart
" Rockport	Portia x Theresa	Rod McLellan Co.
" Teargold	Gold Luna x Tearlath	(E. W. McLellan)
" Ukiah	Balafine x Haroun	" " "
Dendrobium Gregor Duruty	phalaenopsis x goldiei	" " "
Epicattleya Ecstasy	Epid. atro purpureum x Catt. R. Prowe	" " "
Epidendrum Fifi	atro purpureum x Betty May	" " "
*Epigoa Olivine	Domingoa hymenodes x Epid. mariae	" " "
Laeliocattleya Alice F. Lilly	Hirami x C. Tulsa	" " "
" Betty Power	Linnaeus T. Savage x C. Gloriette	Charlesworth & Co.
" Derrygate	Derrynane x Ludgate	(Mansell & Hatcher)
" Glorydow	C. dowiana x Gatton Glory	Rod McLellan Co.
" Mary Clymer	L. flava x Windermere	(E. W. McLellan)
" Miami Shores	Princess Prudence x South Esk	Gregor A. Duruty
" Pamela Rogers	Oliver Lines x Max J. Palm, Jr.	W. W. G. Moir
" Paula Rogers	C. Titrianæ x Derrynane	Alex. C. Chang
" Ruth Appel	Derrynane x C. Metapan	W. W. G. Moir
		Thornton's Orchids
		(F. W. Gamble)
		Fields Orchids
		" "
		J. W. Williams
		(Wm. Kirch)
		Fields Orchids
		" "
		" "
		Thornton's Orchids
		(Rivermont)

Laeliocattleya Vallatar	Ishtar x Vallandina	Fields Orchids
" Westgate	Westwood x Ludgate	" "
Miltonia Alexandre Dumas	Emotion x Brigadier	P.F.F. Vacherot & Lecouffe
" Anjou	Hoggar x Piccadilly	" "
" Brigadier	Albert Burrage x Brighteyes	Sanders
" Clio	Etendard x Mem. Fred Sander	M. Vacherot
" Hoggar	Nyasa x Clio	" "
" Mokadem	Nyasa x Hoggar	" "
" Professor Picard	Belgica x William Pitt	Sanders
" Rosemary Sander	Lycaena x h. Nelly Sander ign.	"
" Storm	Mokadem x Piccadilly	P.F.F. Vacherot & Lecouffe
Odontioda Pamino	Topa x Minosha	Charlesworth & Co.
" Toriava	Astoria x Avala	" "
Odontoglossum Caroline Gaunt	Aireworth x Brimstone Butterfly	Norman H. Gaunt (Mansell & Hatcher)
" Stropheon	Opheon x Robert Strauss	Charlesworth & Co.
Oncidium Anna Rosa	sylvestre x pulchellum	W. W. G. Moir
" Erma Warne	urophyllum x pulchellum	" "
" Golden Glow	triquetrum x urophyllum	" "
" Hispaniola	sylvestre x flexuosum	" "
" Michael Hart	urophyllum x tetrapetalum	" "
" Pastel	variegatum x intermedium, syn. luridum	" "
" Sunrise	tetrapetalum x intermedium, syn. luridum	" "
" Tiny Tim	triquetrum x intermedium, syn. luridum	" "
" Waikiki Sunset	pulchellum x intermedium, syn. luridum	" "
Phalaenopsis Akala	Moanalua x schilleriana	R. & T. Okubo (W. W. G. Moir)
" Golden Louis	Doris x mannii	T. Kazumura
" Pink Birthday	Pink Glory x Marmouset	Lewis C. Vaughn
" Pink Star	Rothomago x lueddemanniana	" " "
" Ramona	Thos. Tucker x Mem. Nasu Tomoguchi	" " "
" Serenity	Doris x Thos. Tucker	Shaffer's Tropical Gns.
Renantanda Kumu	V. Emily Notley x Ren. coccinea	Lewis C. Vaughn
Renanopsis Embers	Vandopsis Lissochiloides x Ren. monachica	E. T. Iwanaga
Sophrolaeliocattleya Soft Glow	C. Woltersiana x Nanette	Woodlawn Nurs. Horticulture Flandria

*This is the first time this intriguing new Hybrid has flowered. It is photographically strictly intermedium.

Corrections to Orchid Hybrid List Main Book:—

Page 197, Table 1, Col. 1, Line 53: for Oda. Colette (Columbia x Jeanette) C. 1945, read Oda. Bianette, etc.

Page 240, Table 11, Col. 1, Line 34, for x Jeanette=Colette, read x Jeanette=Bianette.

Page 243, Table 11, Col. 11, Line 19: for x Columbia=Colette, read x Columbia=Bianette.

August, 1957

Brassolaeliocattleya Betty Proctor	Lc. Santa Claus x Louisa	Dr. E. M. McPeak
" Brenda	Bc. Princess Patricia x Lc. Sam Houston	Wallace Liu (M. Miyamoto)
" Cindy Powers	Dawn Angela x Lc. Cuesta	E. T. Iwanaga
" Cronos	Lc. S. J. Bracey x Nugget	B. O. Bracey
" Memoria Maurine	Marion Ryerson x C. Isora Nadalini	Daniel Ryerson
" Mimi Bachrach	Lc. Heather x Nanette	Dr. E. M. McPeak
" Pepita	Lc. Danae x Reve d'Or	Maurice Vacherot
" Rubens	C. dowiana x Nugget	B. O. Bracey
" Ryersonwood	Lc. Westwood x Marion Ryerson	Daniel Ryerson
Cattleya Allan E. Walker	C. mossiae x C. Wembley	Dr. E. M. McPeak
" Arizona	Dupreana x Annie J. Lines	B. O. Bracey

Cattleya Concord	Gamut x Annie J. Lines	B. O. Bracey
" Elboron	Sohma x Gloriette	G. M. Hoyt (Black & Flory)
" Eugene Pendergrass	Athena x Hentschellii	Dr. E. M. McPeak
" Lily Hampton	Celia x Bob Betts	B. O. Bracey
" Loki	Claribelle x Fabia	" "
" Memoria Virginia Martin	Henrietta Patterson x Dorothy Mackaill	H. Patterson
" Pre-Dawn	Tethys x Stephen Sander	Daniel Ryerson
" Rhythm	Ardmore x Ville de Liege	B. O. Bracey
" Rossetti	Tethys x mossiae	" "
" Sleigh Bells	Jean Barrow x Bow Bells	" "
" Vadius	Merope x amabilis	Maurice Vacherot
" Victoria	Beryl Fleming x Gloriette	G. M. Hoyt (Black & Flory)
" William J. Miller	Dupreana x Athena	Dr. E. M. McPeak
Cymbidium December Dawn	Doris x Charm	Sanders
" Ingleborough	Promona x Nam Khan	J. Moulson
Cypripedium Alan	Loudwater x Ernest E. Platt	R. H. Umaki
" Brobord	Bromohur x Bordube	Rod McLellan Co.
" Byblis	Detaille x Sullumbus	(E. W. McLellan)
" Carolmiya	Swale x Severn	Maurice Vacherot
" David White	Earl of Chester x Redstart	R. H. Umaki
" Kula	Graceful x Dervish	S. C. Scanes
" Lady Grace	Lady Mona x Grace Darling	(Armstrong & Brown)
" Lictur	Cappamagna x Nadir	R. H. Umaki
" Mauna Kea	Peridot x Snow Bunting	" "
" Millvalley	Clementine H. Churchill x Milvara	Maurice Vacherot
" Palolo	Diana Broughton x Ranger	Dr. T. F. Fujiwara
" Puunui	Etta x Worston	(dos Pueblos)
" Sironian	Ionian x Siroco	Rod McLellan Co.
" Thehunt	Theresa x Huntava	(E. W. McLellan)
" Ultra	Solum x Banchory	R. H. Umaki
Dendrobium Amber Glow	taurinum x Dana	" "
" June Yee	Robbie Camp x veratrifolium	Maurice Vacherot
" Sea Foam	Neo Hawaii x grantii	Rod McLellan Co.
" Two-tone	taurinum x Janice Tanaka	(E. W. McLellan)
Laeliocattleya Amphion	S. J. Bracey x L. tenebrosa	Maurice Vacherot
" Anne Follis	C. granulosa x Ethel Merman	Limberlost Nursery
" Antea	Hassallii x C. Ardmore	Mrs. Mary Yee
" Aquitaine	C. Ann Sander x Pontcarral	(Hung Ung Young)
" Bill Murchison	C. Fabia x Princess Ishtar	Y. Inouye
" Britannizade	Britannia x Parizade	Kodama Orchid Nursery
" Chispa	C. Eleanore x Nora Fontaine	B. O. Bracey
" Culmiant	Ile de France x Gaillard	Rod McLellan Co.
" Dorothy Reed	C. mossiae x Dulzura	(E. W. McLellan)
" Helen Meyner	C. mossiae x Louella O. Parsons	B. O. Bracey
" Key Lime	Plymouth x C. Edmond Demunter	P. F. F. Vacherot & Lecouffe
" Kyse	Montcalm x Cyrano	Mary M. Fuller
" Hilo Bay	Hecuva x Marlace	(Roy K. Fields)
" Marlace	Kitty Wallace x Princess Margaret	Daniel Ryerson
" Nancy Alfaro	Rondeau x Robertsoniae	B. O. Bracey
" Niobe	Edith Dorpe x Blanchette	Maurice Vacherot
" Polyidus	Dinador x C. warscewiczii	Dr. E. M. McPeak
" Procris	C. Eloquence x Canberra	H. Patterson
" Revlon Glow	Gwen Sander x C. trianae	Daniel Ryerson
" Santa Ana	Mem. Albert Heinecke x S. J. Bracey	Maurice Vacherot
" Susanville	Susan x Cabazon	T. Ogawa
		" "
		(Sherman Adams)
		Dr. E. M. McPeak
		B. O. Bracey
		" "
		" "
		Daniel Ryerson
		B. O. Bracey
		Rod McLellan Co.
		(E. W. McLellan)

Laeliocattleya Tableau	Prima Donna x C. Dinah	B. O. Bracey
" Tiburon	Atlantis x Elissa	Rod McLellan Co. (E. W. McLellan)
Lycaste Auburn	balliae x Sunrise	Mrs. J. R. Oddy
Miltonia Elizabeth Hoyt	Solfatari x Firefly	G. M. Hoyt
" Ninety One	ign. x ign.	" (Black & Flory)
Oncidium George Hart	triquetrum x cabagrae	W. W. G. Moir
" Jamaica	tetrapetalum x pulchellum	Nat. Hyb.
" Suzanne Cornetti	cabagrae x Comtesse de Britonne	W. W. G. Moir
Phalaenopsis Blanche Overman	Waipio x Atala	O. M. Kirsch
" Fantasy	Dark Hawaii x Hawaii	Mrs. Lester McCoy
" Rosiere	Clorinde x Reve Rose	Maurice Vacherot
" Shocking Pink	Reve Rose x Pink Sunset	Mrs. Lester McCoy
" Silver Moon	Bobby Boy x Doris	" Daniel Ryerson
Potinara Bright Gem	Ethel Ward x superba	T. Kazumura Orchid Nursery
Sophrolaeliocattleya Bennie Bell	Rainbow Hill x Mrs. Medo	G. M. Hoyt
" Douglas Fir	Lc. Vandeletta x Anzac	" Daniel Ryerson
" Norman Crooks	Hermes x Anzac	" " "
" Radiant Rouge	Radill x Lc. Rubens	Woodlawn Orch. Nurs. (W. W. G. Moir)
" Radill	Radians x Lc. Illione	Lee Kim Hong
Vanda Andree Millar	Cobber Kain x Miss Joaquim	L. W. Bryan
" Chua Ngin Neo	Trots x Clara Shipman Fisher	O. M. Kirsch
" Erin Bryan	Herziana x Piihonua	R. S. Anderson (W'dlawn Orch. Nurs.)
" Pukele	Betsy Sumner x sanderiana	
" Waimanalo	sanderiana x Prince Charles	

Corrections to Add. III:

Page 353, Oda. Winfrith (O. Isolene x Colette) should read Oda. Winfrith (O. Isolene x Bianette).
Page 480 Col. 1, Colette x O. Isolene should read: Bianette x O. Isolene=Winfrith. Page 482 Col. 1,
x Oda. Colette=Oda. Winfrith should read: x Oda. Bianette=Oda. Winfrith.

Corrections to Main Book:

Page 161 Table 1, Golden Blossom (C. Minnehaha x L. Firefly) should read: Golden Blossom (C.
Minnehaha x Lc. Firefly). Page 187, Delete Firefly x C. Minnehaha=Lc. Golden Blossom. Page 202 Col.
11, under line 45, insert: Firefly x C. Minnehaha=Golden Blossom.

September, 1957

Aranda Helen Gagan	Arachnis Maggie Oei x V. sanderiana	Lee Kim Hong
Brassocattleya Lim Theng Hin	C. Bow Bells x B. digbyana	Ng Peng Wah & Tan Aun Phaik (Mansell & Hatcher)
Brassolaeliocattleya Liseflore	Bc. Liesbeth Hacke x Lc. Floralties	Horticulture Flandria
" Right Royal	Wren x Lc. Sunburst	Dr. W. Stirling
Cattleya Maria Losada	Mem. Rosemary x Estelle	Pierre Cholet
" Ruth Welkind	Charlotte Jones x Bow Bells	Daniel Ryerson
Cymbidium Euphrates	Babylon x Cassandra	H. W. B. Schroder
" Nellie Knight	Carlotta x Sussex	E. F. Dean-Burrows (McBean)
" Nile	Baltic x Ramesis	H. W. B. Schroder
" Ormoulu	Pearl Beryl x Baltic	Dos "Pueblos" Orchids
" Pajaro	Nell Gwynne x Enid Haupt	Arthur Freed
" Presidio	Peri x Lowville	" " "
" Wilmoor	President Wilson x Bodmin Moor	Dr. W. Stirling
Cypripedium Boule de Neige	F. C. Puddle x Graciousness	Rod McLellan Co. (E. W. McLellan)
" Bromfield	Bromohur x Burleigh Mohur	R. & E. Ratcliffe
" Doubloons	Minster Lovell x Selina	Dr. "W. Stirling (Keeling)
" Drayton	Robert Paterson x Blagrose	Arthur Freed
" Knavesmire	Mary Thom x Rivington	Maurice Vacherot
" Malibu	Ruskington x Bettina	" "
" Physos	Simonide x Banchory	" "
" Rigoletto	Nadir x Hetaire	
" Sidé	Germaine Opoix x Siroco	

Cypripedium	Sungrove	.....	Minster Lovell x Chilton	.....	R. & E. Ratcliffe
"	Tanagra	.....	Detaille x Turenne	.....	Maurice Vacherot
"	Tocade	.....	Ionian x Mastiff	.....	R. & E. Ratcliffe
Dendrobium	Thistledown	.....	infundibulum x dearei	.....	Dr. W. Stirling
Laelia	Quetzal	.....	cinnabrosa x Pacavia	.....	Maurice Vacherot
Laeliocattleya	Fidelio	.....	C. Mignard x Emir	.....	Dr. W. Stirling
"	Haytedder	.....	Elissa Harietta	.....	"
"	Loddissa	.....	Elissa x C. loddigesii	.....	Horticulture Flandria
"	Ostende	.....	Vallandina x Van der Weyden	.....	Dr. W. Stirling
"	Pretty Jane	.....	C. bicolor x Elissa	.....	"
"	Royal Renown	.....	Beaufighter x C. bicolor	.....	Maurice Vacherot
"	Saadia	.....	C. Nonoska x Mireille	.....	Tom McBroom
"	Seminole Queen	.....	Sargon x C. superba	.....	Dr. W. Stirling
"	Solitaire	.....	L. cinnabrosa x Sargon	.....	Maurice Vacherot
"	Tancrede	.....	Amrar x Gaillard	.....	H. E. Voss (Kiesewetter)
"	Velma Voss	.....	Trails End x Hilary	.....	Charlesworth & Co.
Odontoglossum	Perolia	.....	Perryanum x Mongolia	.....	R. R. Kiesewetter
Phalaenopsis	Cast Iron Monarch	.....	Louise Georgiana x Doris	.....	Vallemar Gardens
"	Fairway Park	.....	Thos. Tucker x Winged Victory	.....	Maurice Vacherot
"	Fandango	.....	Marmouset x sanderiana	.....	R. R. Kiesewetter
"	Joanna Magale	.....	Chieftain x Cast Iron Monarch	.....	Maurice Vacherot
"	Lakme	.....	schilleriana x Helle	.....	"
"	Linda Mar	.....	Thos. Tucker x Dr. Henry O.	.....	Vallemar Gardens
"	Mahinhin	.....	Eversole	.....	John H. Miller
"	Marguerite W. Stephens	.....	equestris syn rosea x lueddemanniana	.....	R. R. Kiesewetter
"	Pacifica	.....	Cast Iron Monarch x O. M. Kirsch	.....	Vallemar Gardens
"	Sea Cliff	.....	Doris x F. D. R.	.....	"
"	Sharp Park	.....	Grace Palm x F. D. R.	.....	"
"	Vallemar	.....	Grace Palm x Dr. Henry O. Eversole	.....	"
"	White Butterfly	.....	Grace Palm x Atlanta	.....	Arthur Freed
Potinia	Harlequin	.....	Grace Palm x Snowflake	.....	Dr. W. Stirling
Sophr. laeliocattleya	Ballet	.....	Ble. Wren x Sc. Peach Blossom	.....	"
Vanda	Brendan D. Loui	.....	Lc. Elissa x Sc. Doris	.....	Albert A. Ahin (J. K. Noa)
"	Coconut Grove	.....	Emma van Deventer x Rothschildiana	.....	Alex D. Hawkes
"	Elsie Loke	.....	Loko x Ellen Noa	.....	Dr. T. P. Loke
"	Mamo	.....	Emma van Deventer x Bill Sutton	.....	Masaya Miyao
"	Mousie	.....	hookeriana x Tutzeri	.....	Alex D. Hawkes
"		.....	concolor x teres	.....

Corrections to Add. I:

Page 264, L.25, Delete: C. Danescilla etc., Page 277, Under L. 22 insert: Danescilla (Jane Dane x C. Priscilla "alba") Kwr. 1946. Page 319, Col. 1, L. 11/12 Delete: Jane Dane x Priscilla=Danescilla. Page 322, Col. 1, L. 26, should read: x Lc. Jane Dane=Danescilla. Page 347, Col. 11, Under L. 50 insert: x C. Priscilla=Danescilla.

Correction to Add. III:

Page 435, Col. 1, L.32: Lc. Elina Isaacs should read: Lc. Elinor Isaacs.

October, 1957

	Parentage	Flowered by
Aranda Cy. C. Duvauchelle	V. Walter F. Dillingham x Arachnis flos-aeris	Nakagawa O. N.
Brassocattleya Joy	Mrs. Robert Patterson x C. trianae	R. H. Gore—Orchids
" West Indies	Yeovil x C. Nigrella	Sanders
Brassolaeliocattleya Democrat	Lc. Balkis x Jim Farley	R. H. Gore—Orchids
" Doge	Lc. Marianne x Princess Margaret	" " "
" Holiday	Lc. Santa Claus x Sindoro	" " "
" McInerny	King Emperor x C. Edithiae	T. Ogawa—Orchids
Cattleya Freire Alemao	Blackii x Mlle Louise Pauwels	W. Silva
" Memoria Fred K. Sander	Nigrella x Fred Sander	Sanders
" Ulanova	Pavlova x mossiae	O. M. Kirsch
" Wedding Bells	Barbara Billingsley x Astron	R. H. Gore—Orchids
Cymbidium Aloha	Carlotta x Eclipse	Greenoaks
" Amina	Eclipse x Lyoth	"
" Deodar	Erica Sander x ign	"
" Elizabeth Cram	Pauwelsii x Reginald	Mrs. Wm. Moffat (Mrs. E. Carpentier)

Cymbidium Green Mansions	Rosette x Swallow	Greenoaks
Dendrobium Lee Kok Cheng	T. Shioi x phalaenopsis syn. schroderianum	Lee Ewe Boon (Wm. Kirch)
" Warren Q. Yee	Nanette Leilani Todd x gouldii	Mary Yee (E. Young)
" Tau	Dark Victory x undulatum	A. C. Chang
" Roy	May Neal x Aina Haina	D. "C. Ai"
" Rodney Okuma	Nanette Leilani Todd x undulatum ...	Hung Ung Young
" Pearl Donnell	Mildred Kazumura x Janice Tanaka	R. & T. Okubo
" Paula Ortiz	Ruth Thomas x Takami Kodama	A. C. Chang
" Oni-oni	Carol Goo x undulatum	J. "K. Noa"
" Narcissa	Walter Carter x Janice Tanaka	H. K. Nitta (H. Kagawa)
" Myron Mooney	Caesar x grantii	Luther Wong (H. Otake)
" Mem. Rin Nitta	Joanne Sawers x phalaenopsis syn. schroderianum	Hung Ung Young
" Mem Lai Kam Wong	Joan Tani x gouldii	A. C. Chang
" Linda Tomita	Diane Nonaka x Hula Girl	E. S. Kondo (Hung Ung Young)
" Lemuel	Lum Goo x phalaenopsis syn. schroderianum	A. C. Chang (A. C. Ho)
" Helen Izuta	Caesar x Shibata	A. C. Chang
" Haunani Gay Ho	Sunset x Janice Tanaka	" "
" Edith	Lum Goo x undulatum	" "
" Edison	Kam Heights x undulatum	" "
" Cathy	Sunset x undulatum	" "
" Alstance	Alex C. Chang x Constance	Y. Inouye
" Lady Hamilton	Diamond Head Beauty x phalaenopsis syn. schroderianum	T. Morioka
" Lady Nui	Lady Constance x Hawaii Nui	T. Takiguchi (H. Otake)
" Lynn Takiguchi	Lady Hamilton x Louis Bleriot	T. Takiguchi (H. Otake)
" Ellen Takiguchi	Charlotte Matsuda x Lady Hamilton	R. Matsumoto
" Hawaiian Beauty	phalaenopsis syn. schroderianum x Lady Hamilton	M. Yoshimura (H. Kushima)
" Lady Fay	Lady Hamilton x Lady Constance ..	T. Takiguchi (H. Otake)
" Joanne Takiguchi	Caesar x Lady Hamilton	A. C. Chang (M. Imasaki)
" Russell Imasaki	John Pritchard x Lady Hamilton	T. Shimamoto
Epidendrum Lime Drop	stamfordianum x floribundum	A. L. Chen
Laeliocattleya Alfred Powell	C. trianae x Clothilde	R. H. Gore—Orchids
" Kentucky	South Esk x Eva Robinson	" " "
" Kentucky Colonel	South Esk x Ted Trimble	" " "
" Kiss Balkis	Kismet x Balkis	" " "
" Stardom	Serlotho x Balkis	W. Silva
" Washington Luiz	C. loddigesii x Paradisio	G. M. Hoyt
Miltonia Bothell	Solfatari x Ninety One 'Ruth Newman'	" " (Stuart Low)
" Edmonds	Solfatari x Woodlands	Limberlost Orchids
" Woodlands	Swinburn x Amanda	Thornton's Orchids (R. H. Gore)
Phalaenopsis Mem. George Nix	Doris x Marianne de Jong	R. H. Gore—Orchids
Potinara Carole Ann	Lc. Richelieu x Medea	E. T. Iwanaga
" Verona	Tripoli x C. trianae	J. E. Russell
Renanthera Tom Thumb	monachica x imschootiana	
Vanda David Chandler	Flammerolle x Frankensteiniana	

Corrections to Add. III.

Page 347, L.12, delete Elinor Isaacs etc. Page 435, L. 32, delete x Lc. Westwood=Lc. Elina Isaacs.

Page 479, L. 11/12, delete Westwood x C. guttata=Elinor Isaacs. Page 342, L. 51, delete Lady Nui etc.

Page 463, L. 43, Col. 1: delete x Phalaenopsis=Lady Nui.

Page 465, L. 23, Col. 11: delete x Diamond Head Beauty=Lady Nui.

Correction to November, 1956 List: Blc. Alexann should read Bc. Alexann.

Correction to February, 1957 List: Delete Den. Patrick Kirch etc.

‡ Reprinted by kind permission Orchid Review (Eng.) May to October, 1957.

Agents for the "Australian Orchid Review"
in Great Britain

Messrs. B. F. Stevens & Brown Ltd.,
Library & Fine Art Agents,
77-79 Duke Street,
Grosvenor Square, W.1,
LONDON

are carrying stocks of current and back numbers
of the *Australian Orchid Review*. Readers in
Great Britain should communicate with them
regarding their supplies.

NOTICE TO ADVERTISERS

All enquiries as to Advertising space
should be addressed to the proprietors:

AUSTRALIAN ORCHID REVIEW
SHEPHERD & NEWMAN PTY. LTD.
YURONG ST., SYDNEY - FA3178

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W.

PHONE: FA7462

SPECIAL QUOTATION FROM

ORCHIDS (NANKIVELLS)

REGD.

74 Sheridan Street, CAIRNS, N.Q.

PHONE 2584
AFTER HOURS: 3029



IMPORTED CATTLEYA PLANTS

Now ready for Sale.

Splendid Value.

	Approx. Length Longest Bulb
C. Priscilla Alba x L. C. Jane Dane.—White petals mauve lip, in well formed flowers. Strong plants.	5"—9"
S.L.C. Anzac F.C.C. x L. C. Sargon.—Beautiful purple magenta flowers, well formed	6"—11"
L.C. Canhamiana (L. purpurata x C. Mossiae).—A fine form of spring and early summer flowering hybrid	11"—14"
C. Thetis x L. C. Windermere var. Clovelly A.M.— Fine winter flowering mauves in excellent form. Strong bulbs	6"—12"
L.C. Clifton Down (Princess Margaret x Mossiae R. E. Patterson).—Very free flowering mauve. Good form Winter. Nicely ruffled lip.	13"—18"
L. C. First Nighter (H. G. Alexander F. C. C. x Mossiae R. E. Patterson). A fine deep mauve and flowering for the winter season	9"—12"
C. Trimos x L. C. Helen Wilmer.—Excellent mauve for winter season. Strong	9"—14"
C. Bob Betts (Bow Bells x Mossiae Wagnerii).— One of the finest white cattleyas in cultivation.	10"—13"

	Approx. Length Longest Bulb
C. Heatherwood (Tityus Perfection x Mossiae R. E. Patterson).—Very vigorous and free flowering mauve. Various flowering seasons. Often flowers twice per annum. Strong plants. Deep mauve. Good lip	14"—20"
L. C. Canhamiana Alba x L. C. Snowdrift.—Ex- cellent quality in white class. Good form, white petals and sepals, mauve lip, large flower	11"—15"
L. C. Coronet: (Vallandina x Illustrious).—Fine large flower of good form. Petals and sepals of rosy mauve, lip deep purple	8"—11"
B. C. Charybdis Queen (C. Charybdis x B. C. British Queen).—Superbly bred. Good form. Win- ter flowering, very vigorous plants. Deep lavender Large lip. Ruffled	12"—16"
L. C. Audrena x L. C. Ivanhoe.—Expected to pro- duce a fine large mauve flower of good form. Winter	7"—10"

Please send for Price List of these and other Orchids.

Books on Orchids, Etc.

- ORCHIDS—THEIR CULTURE (Bruce Hogg, Melb.) Col. & B/W plates. £2/10/-. Post 1/-
 ORCHID GROWING (J. W. Blowers). Illust., 5/- Post 5d.
 GROWING CYMBIDIUM ORCHIDS & OTHER FLOWERS (L. M. Boyle). Story of El Rancho Rinconada. Illust., £4/12/6. Post 3/6d.
 EXOTIC PLANTS OF THE WORLD (M. Belvianes, trans. A. J. Huxley). Col. plates, £2/-/. Post 1/6d.
 A.B.C. OF ORCHID GROWING (J. V. Watkins). Illust., £1/14/3. Post 1/3d.
 SIMPLE PROPAGATION (N. J. Prockter). Illust. 8/9d. Post 9d.
 SEED & POTTING COMPOSTS (Lawrence & Newell) with special reference to soil sterilization. Illust., 15/9d. Post. 9d.
 ORCHIDS AS HOUSE PLANTS (R. T. Northen). Illust. £2/0/3. Post 1/6d.
 THE CHARM OF GROWING ORCHIDS (P. A. Gilbert of N.S.W.). Illust. £1/16/-. Post, 1/6d.
 SIMPLE PRACTICAL HYBRIDISING FOR BEGINNERS (D. G. Thomas). Illust. 18/9d. Post, 1/-.
 SUCCESSFUL ORCHID CULTURE (P. R. C. Rittershausen). Illust. 18/9d. Post, 1/-.
 ORCHIDS—FLORA OF MALAYA (R. E. Holttum). Illust. £4/10/-. Post, 4/-.
 AMERICAN ORCHID SOCIETY BULLETIN, Vol. 1 (1932) to Vol. 24, No. 5 (1955). An almost complete run, in addition Am. Orc. Soc. Bull. Consolidated Index Vol. 1 to 13, plus Year Book 1951, S/H, £80/-/. Post. extra.

We search the World for rare and out of print books successfully.

WRITE FOR OUR COMPLETE LIST OF ORCHID BOOKS.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

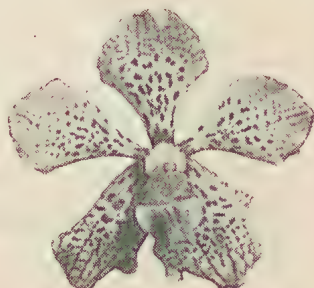
::

PHONE: MU6129

VANDA BEGINNER • THE ORCHID FOR YOU IS

VANDA TATZERI

(STRAP LEAVED) - - - - - ROSE BROWN



FREEFLOWERING

BEAUTIFUL

INEXPENSIVE

Vanda Tatzeri. (V. Tricolor x V. Sanderiana)
 Vanda Tatzeri. (V Tricolor planelabris x V. Sanderiana var. Robert Warne).

					Price per plant
Flowering size, approx.	8	leaves	15"	across span	£3 0 0
Seedlings	" 6	"	12"	" "	1 10 0
Seedlings	" 5	"	8"	" "	15 0

Air freight extra

Write for up to date price list of other Orchid plants such as Cattleyas, Dendrobiums, terete and semi terete vandas, pink and white phalaenopses.

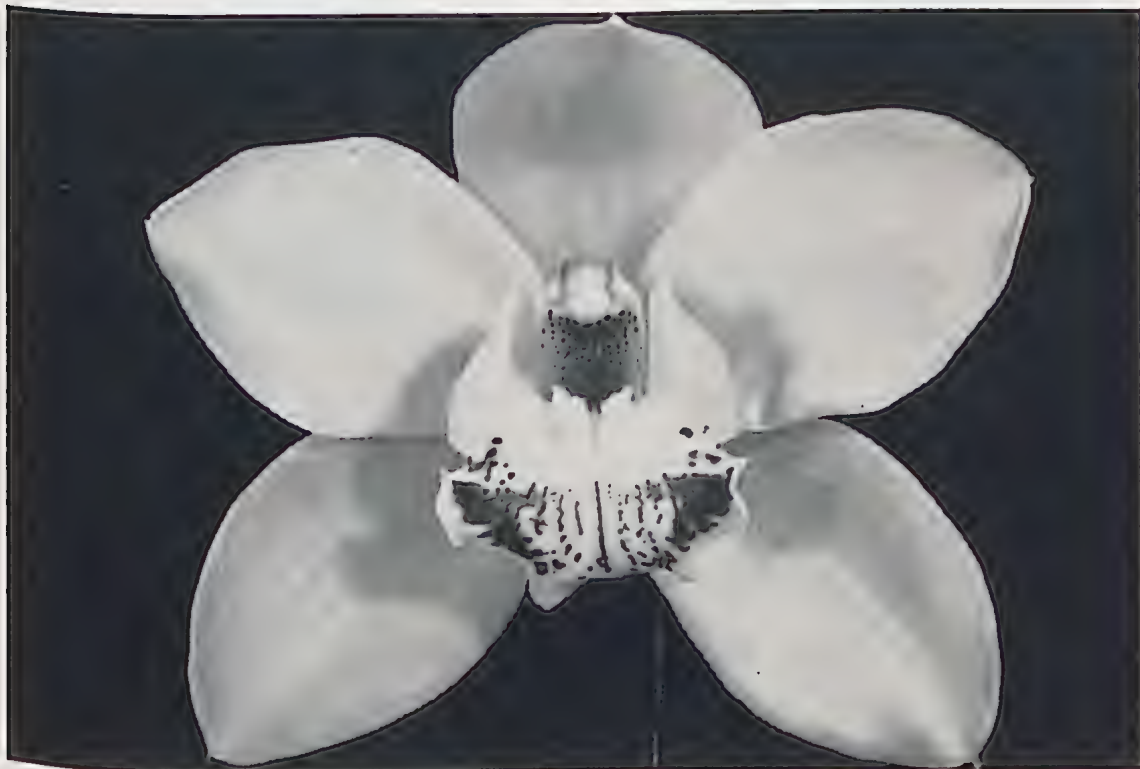
KIRKWOOD'S TROPICAL ORCHIDS

342 SHERIDAN ST., CAIRNS, NORTH QUEENSLAND. Phone 2385

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

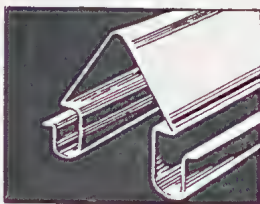
GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

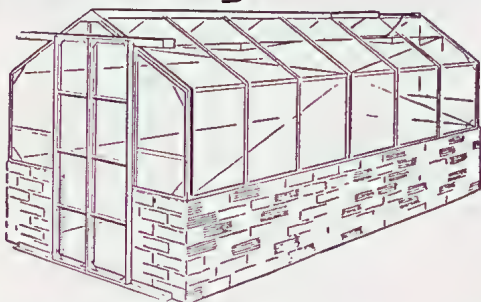
Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
 49 Aird Street, Parramatta — YL9961
 135 Forest Rd., Hurstville — LU2066
 67-69 Burelli St., Wollongong—B3301-8
 932 Pacific Highway, Chatswood—JA3462

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet

Price: £91-6-0

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

HORTICULTURE FLANDRIA

LTD.

BRUGES - - - BELGIUM

CATTLEYAS: Hybrids of Cattleya and allied genera are our great speciality.

Over 200,000 mature plants and new hybrids available.

CYPRIPEDIUMS: For choice flower production—a few specials for the amateur.

CYMBIDIUMS: We regret that all available seedlings are sold out for the time being.

Special Orchid Catalogue free on request.

Shipments by air recommended all through the year.

Payment by cheque in Sterling or Bank Draft on London.

A permit to import is necessary.



No. 24
(See List "Limberlost"
Seedlings below)

Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas



"LIMBERLOST"

Orchid Seedlings

First General Offering of Orchid Seedlings to Old and New Growers. Fascinating Hybrids that will bring both Pleasure and Profit as they mature.

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10 V. Tatzeri x V. Caroline Robinson
- No. 11 V. Sanderiana x V. Rothschildiana
- No. 13 V. Mary Foster x V. G. Myamoto
- No. 22 V. E. Fujinaga x V. Sanderiana
- No. 29 V. G. Triboulet x V. Coerulea
- No. 25 V. Haleakala x V. Sanderiana
- No. 31 V. Teres Giganteum x V. Hommage a Segovia
- No. 37 V. Tatzeri x V. Coerulea
- No. 56 V. Hommage a Segovia x V. Joaquim Atherton
- No. 46 V. Sanderiana x V. Suavis
- No. 32 V. Dearei x V. Henrietta Ho
- No. 26 V. Henrietta Ho x Renanthera Storiei
- No. 35 V. Dearei x Arachnis Ishbel
- No. 40 Phalaenopsis Denevei x Arachnis Ishbel
- No. 36 V. Henrietta Ho x Arachnis Ishbel
- No. 30 V. Henrietta Ho x Arachnis Maggie-Oei
- No. 55 V. Alice Fukunaga x Arachnis Maggie-Oei
- No. 60 V. Tatzeri x Arachnis Maggie-Oei
- No. 24 D. Schroederianum var. bicolor
- No. 27 D. Janice Tanaka x D. Broomfieldii
- No. 39 D. Broomfieldii x D. Phal. var. Snow White
- No. 48 D. Bigibbum x D. Veratrifolia
- No. 49 D. Bigibbum x D. Broomfieldii
- No. 57 D. Tofftii x D. Phal var. Snow White
- No. 58 D. Phal. var. Snow White x D. Grantii
- No. 62 V. Dearei x V. Joaquim var. Atherton

(Assorted if desired)

Above Plants: size (2"-3") 7/6 ea.; £4/4/- per doz., ex Community Pots.

Special Quotes for smaller size COMMUNITY PLANTS on application.

No. 13. V. MARY FOSTER x GERTRUDE MYAMOTO. Advanced seedlings. 6"—25/- ea.

No. 24 DENDROBIUM SCHROEDERIANUM var. BICOLOR. Flowering size—21/- ea.

No. 35. ARANDA FRECKLES. Advanced seedlings, 8".—15/- ea.

No. 26 VANDA HENRIETTA HO x RENANTHERA STORIEI. Advanced seedlings. 8".—25/- ea.

No. 11 VANDA ONOMEA. Advanced seedlings. 6"—25/- ea.

Please add 7/6 with orders to cover Air Freight and forwarding charges. If phone number, please add.

"ORCHIDS and OTHER PLANTS". New 16 page Catalogue. Please send Stamped Addressed Envelope for copy.

"Q" LISTS available of NEW IMPORTATIONS from Leading Overseas Nurseries.

CULTURAL CHARTS available on request. Phone 9262

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.Q.

UNSURPASSED QUALITY
ORCHIDS
by
(P. F. & F.)
VACHEROT & LECOUFLE
AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for
CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

TREMORVA ORCHIDS

for

Quality Cymbidiums and Cypripediums

Most Award Cymbidiums in Stock or available from
associates. Cypripediums a speciality. Inspection invited
to see the method of cultivation under cold conditions and
results.

Inspection Saturday afternoon. Sundays only.

TREMORVA ORCHIDS

R. E. Trenerry

24 MURRAY STREET, LANE COVE, N.S.W.
(Off Ralston Street, near Mowbray Road Bus Shed)

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER S & O FRANCE

Visitors always welcome

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney
MON., MAR. 31st MON., APR. 28th MON., MAY 26th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane
FRI., MAR. 14th FRI., APR. 11th FRI., MAY 9th

Patron: Sir JOHN B. CHANDLER, Swann Road, Taringa, S.W.1.

President: E. A. KNOBLAUCH, Denham Terrace, Wellers Hills, Brisbane.

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY, 59 Armentieres St., Kedron, Brisbane.

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.
MON., MAR. 17th MON., APR. 21st MON., MAY 19th

President: G. E. FLOYD, 25 Grand View Rd., Nth Brighton. Phone XM4996

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide
THURS., MAR. 6th THURS., APR. 3rd THURS., MAY 1st

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: R. J. LANGDON, 8 Regent St., Millswood

Hon. Secretary-Treasurer: F. C. BRIDGE, Elizabeth St., Woodside. Phone 01, Woodside 69.

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.
FRI., MAR. 28th FRI., APR. 25th FRI., MAY 23rd

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Hon. Secretary: H. W. HILL, 20 Waterford St., Inglewood.

Hon. Treasurer: N. CORY, 5 Arlunya Ave., South Belmont.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* Miss J. Sargison. *Hon. Secretary:* Mrs. H. S. Watson.
Cambridge, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade,

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review



PUBLISHED QUARTERLY

VOLUME 23. No. 2.

PRICE 3/6

JUNE, 1958



SYDNEY TRIBUTE TO QUEEN ELIZABETH, THE QUEEN MOTHER

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

The Illustration below depicts Orchid splendour at Frank Slattery's Nursery.



Orchids

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

Here is an excellent opportunity to add new varieties to your collection at reasonable cost. These are sturdy bush house grown plants in 4" pots, sizes vary from 5" to 8" or more high.

Pearl Mag. x Olympus 'Rosy Queen'	10/- each
" " x Rusper 'Waverley A.D.'	10/- "
" " x Pink Beauty	10/- "
" " x Midlothian 'Greensleeves H.C.C.'	15/- "
Sussex "Laelia Sasso" x Pearl Mag	20/- "
" " x Monica The Finest	10/- "
" " x Athens 'Tanandra'	15/- "
" " x Profita 'Luath H.C.C.'	20/- "
Alex "Westonbirt" x Midlothian "Greensleeves" H.C.C.	15/- "
" " x Firebird 'Dover Heights'	15/- "
" " x Blue Smoke (California)	20/- "
" " x Pearl Mag.	15/- "
Cariga "Sorrento" x Swallow	15/- "
" " x Sussex 'Laelia Sasso' H.C.C. and A.D.	20/- "
" " "Julia" x Swallow	10/- "
Lucifer "Diane" x Pink Beauty	10/- "
Sparta "Etna" x Carisbrook 'Brick' A.D.	10/- "
Pauw. C. DE. H. x Carisbrook 'Thelma' A.D.	15/- "
Redcap "Hoggs" x Sussex 'Laelio Sasso'	15/- "
Balkis "Luath A.M." x Carisbrook 'Bexley' H.C.C.	20/- "

LATEST HAWAIIAN STRAP LEAF & SEMI-TERETE VANDAS

Prices. 3 sets of leaves £3 per plant. 4½ to 5 sets £4. 6 to 7 sets £5
Nearing flowering size, £7/10/-.

V. Sanderiana x Manilla (Bill Sutton)	V. Betsy Summer x Sanderiana
V. " x Honolii	V. Rothschildiana
V. " x Joan Swearingen	V. Rothschildiana x Manilla
V. " x Rose Davis	V. Iwasaki x Rothschildiana
V. " x Ohu-Ohu	V. Trisker x Rothschildiana
V. " x Sauvis	V. Mary Foster x Rothschildiana
V. Honolulu x Sanderiana	V. Ellen Noa x Clara Fisher
V. Sanderiana	V. Manilla x Tatzert
V. Trisker x Sanderiana	V. Laukapu
V. Tita Mark x Sanderiana	V. Honolulu
V. Laukapu x Sanderiana	V. Ohu-Ohu
V. Sauvis x Sanderiana	

In some crosses only small plants are available so please give second choice when ordering.

SEMI-TERETE TYPES. Only small plants available

V. Emma Van Deventer x Ellen Noa	V. Velhus x Sanderiana.
V. Emma Van Deventer x Rothschildiana	
V. Nelly Morley John Noa's famous No. 512 cross.	2 to 2½ Sets Leaves, £2 per plant
	3 or More Sets Leaves £2/10/- per plant.

PLEASE ADD FREIGHT WITH ORDERS

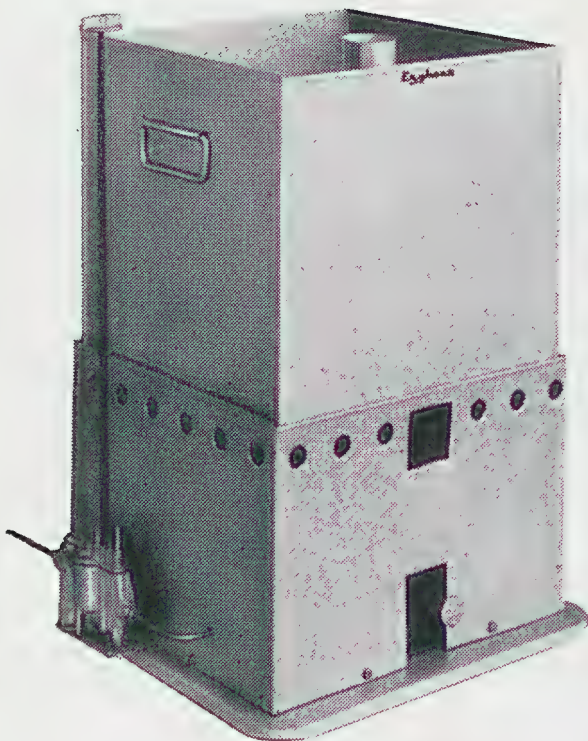
Beginners welcome and all assistance given. Open 7 days weekly.

Frank Slattery's

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985



Just Released!

"ezyheat"

**HOTHOUSE
& AQUARIUM
KEROSENE
HEATER**

£18-10-0

Heat output is sufficient for a standard 9' x 12' glasshouse. A large removable water reservoir keeps the air moist.

THE BURNER is the patented "Billar" burner . . . operates without wicks or asbestos, cleaning only once yearly.

THE CONTROLS have the famous "Ezyheat" control valve unit.

THIS HEATER OPERATES 24 HOURS ON ONE GALLON OF KEROSENE.

The EZYHEAT HOTHOUSE HEATER is the result of eight years of research and practical tests and is designed for the average horticulturist wanting a constant warm, humid and CLEAN atmosphere.

By concentrating solely on a solid construction and first class performance, without luxurious trimmings, it is possible to bring the unit well within the reach of every amateur or professional, at the reasonable price of £18/10/- f.o.r. Melbourne.

The EZYHEAT HOTHOUSE HEATER can be directly connected to a standard 44 gallon drum or to a large tank obtainable from an Oil Company. If solely for agricultural or horticultural purposes these drums or tanks can be loaned on payment of a deposit.

Standard 2" downpipe can be affixed to the chimney leading the exhaust gas OUTSIDE the hothouse eliminating any risk of contamination of your plants by CO₂ or other harmful effects. If employing a zig-zag outlet, approx. 20% more heat is retained in the hothouse.

At small extra cost we will supply a tap with built-in strainer to fit the drum or tank. All other parts are obtainable at low cost.

Send us a rough drawing of your hothouse giving the major dimensions, location and height of benches, width of passages, etc. We will send you—FREE OF CHARGE—our advice how to install the hothouse heater to the greatest advantage and a detailed statement of the total cost including tap, strainer and fuel pipes.

YOU CAN RUN AN EZYHEAT HOTHOUSE HEATER ON SEVEN GALLONS OF KEROSENE
FOR ONE WHOLE WEEK—DAY AND NIGHT

PANTAS

**PTY.
LTD.**

205 LATROBE STREET, MELBOURNE. PHONE FB 3744 or FB 3746

(between Swanston and Elizabeth Streets)



dos pueblos presents *Samarkand*

Heathrow 'Mary Bea' x Alexanderi 'Westonbirt' FCC/RHS

This is typical of the progeny resulting from Dos Pueblos crosses . . . many seedlings of which are now available in Australia for the first time.

One of the seedlings we have at present—D.P.4042 Heathrow 'Mary Bea' (2n) x Rosanna 'Pinkie' FCC/RHS (4n)—is expected to be even better than "Samarkand". Rosanna 'Pinkie', of course, was evolved from famous Alexanderi 'Westonbirt' and it has here been used with one of the most highly regarded greens. We expect to see many yellow to light green tints along with the more usual blush shades in this cross.

These seedlings are now about 10-12 inches high . . . Price 70/- each.



YORK MEREDITH
Managing Director

Orchid Company

(AUST.) PTY LTD.

SOUTH CREEK ROAD, DEE WHY WEST

New Telephone Number—XW6333

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a limited number of FLOWERED Cattleyas, FLOWERED Cypripediums and FLOWERED Cymbidiums for sale and are able to despatch to Australia throughout our winter, due to our proximity to London Airport.

We do not at present issue a catalogue, but lists of plants will be willingly sent to enquirers. Please state in what genera interested.

We do not sell community pots or small plants.

4 Winners From George C. Warner's



ZINEB

is the killer for all fungous troubles. Prevents and arrests Black Spot and Black Rot. Non-poisonous; will not burn the most tender foliage. 1 oz. for 2/6 makes 4 gallons; 8 oz. for 10/-; 1½ lb. for 22/6.

CARBAM

Kills Weeds
Nematodes
Insects

George C. Warner's CARBAM is a comprehensive soil sterilant and fumigant for orchid growers. It is a liquid that converts to a gas in the soil . . . ends costly competition from weeds, soil insects, nematodes. The soil can be used after 14 days. 16oz. bottle—16/-; 4 gallon Drums—£4 per gallon.



FOLI 8

is the spray fertilizer that really brings results. Crammed with the right quantity of Nitrogen, Phosphates and Potash, FOLI 8 is 50 times more potent than animal manure and much more economical. 4 oz. packet 2/-; 1 lb. carton 5/-; 5 lb. packets, 15/-.

FASTER

PLANT
GROWTH

with
FORMULA
20



Just a few drops work wonders: Formula 20 is a scientific combination of 10 plant Hormones that creates fast, vigorous growth. Full directions with each bottle—1/6 and 5/6.

Products of George C. Warner Laboratories Pty. Ltd., Pound Rd., Hornsby

ORCHID SUPPLIES

from FRANK SLATTERY

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 3d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

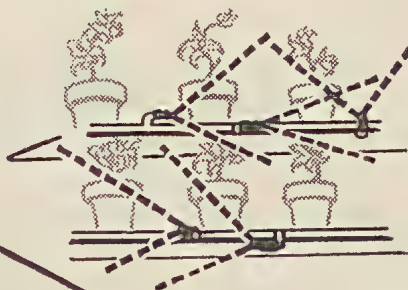
Australian Topea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "**MONARCH**"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT

**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes from about 10" to full flowering size, at prices ranging from 30/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

- French grown Odontiodas, flowering size.
- Odontioda ARIITEA, for strong dark reds.
- Odontioda BALEK, likely to vary from brick red to light red and orange.
- Odontioda SALAM, flowering size seedlings, for very large flowers, pure red or pastel, sometimes purple and white lip.
- Miltonia seedlings, flowering size, many fine crosses to give the darkest clear reds that are ever likely to be achieved.
- Plants of Lycaste Brugense, F.C.C., R.H.S. x Macrobulbum Youngii, A.M., R.H.S.
- Plants of Lycaste Sunrise x Bailliae, Lycaste Brugense, and Lycaste Cruenta.

I have a very large stock of Cattleya seedlings in all sizes for you to select from. These range in price from 25/- for small seedlings, and from 45/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

John Bisset

For Orchids, Bush-house and Glass-house plants. We have one of the finest collections of foliage and indoor plants in Australia. Inspection is cordially invited at both our nurseries.

JOHN BISSET

Show Nursery:

8 Brisbane Avenue, East Lindfield, N.S.W.

Phone: JM1906

Sundays

General Nursery:

48 Wareemba St., Abbotsford, N.S.W.

Phone: WF8124

Week Days.

Publisher and Distributor of:

CYMBIDIUM CULTURE & VIRUS DISEASES, £1/1/-. 1/- Postage

"ORCHID HANDBOOK" BY N.S.W. ORCHID SOCIETY, 8/6.

CULTURE & AWARDS OF ALL GENERA.

6d. postage.

The World's Most Eminent and Successful Breeders of Outstanding Hybrids

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application. . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids.

*Six superbly sturdy
seedlings, 4
sturdy bulbs from 2 inch
pots, to flower
after
two years:*

Cattleya Annette x L. C. Cynthia alba Model.

Cattleya Ballantineana x B. C. Hartland.

Cattleya Aurea x B. L. C. Cadmium.

L. C. Clothilde x B. L. C. Nugget.

L. C. Nina splashed x C. Hardyano—Warnerii.

B. L. C. Hartfield extra dark x Cattleya Horatius.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges paid, and insured—for—Twelve pounds ten shillings sterling.

Illustrated Catalogue and Lists sent upon application.

STUART LOW (Benenden) LTD.

JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

Cymbidium Champions

AWARD AND SHOW TYPE VARIETIES

ARABELLA, MAGNIFICENT, H.C., A.M.
 ARABELLA, WAVERLEY, H.C. (twice) A.M.
 BALKIS LUATH, H.C., A.M. (1957 GRAND CHAMPION)
 CARISBROOK, PLUM (Early).
 CASSANDRA, EVADNE, A.M.
 CASSANDRA, TOXTETH, A.M.
 CELIA, TANANDRA (Prize Green—Early).
 CERES, F. J. HANBURY, A.D. (twice).
 CERES, WESTMINSTER (special pink).
 CHARM, ELEGANCE, A.M., H.C. (Early).
 CORDELIA KURINGAI, A.D. (Colour Champion).
 CYGNUS, JANET (large, cinnamon).
 ESMERELDA (Prize Green).

FALCON, HABERFIELD FLAMINGO, ALLAMBIE, H.C. (twice).
 GIRRAHWEEN, GLORIA, A.M.
 GLORIANA, TUDOR ROSE, (The Champion Pastel Pink).
 HISTORIAN, LINDFIELD, H.C.
 INCA (White Pink. Excellent Shape and Texture).
 JANETTE, GOLDEN CROWN, A.D.
 JOYANCE CINNAMON, H.C.
 JOY SANDER, RUTH, H.C.
 LOUIS SANDER, GIRRAHWEEN (A. Champion Pastel Pink).
 MIRANDA, MAISIE, A.M.
 PERI, Good Big. Yellow/Lime Green.
 PLOVER, No. 1. (Excellent Green).

PRESIDENT WILSON, HABERFIELD.
 PRINCESS ELIZABETH, THE GIANT.
 PRINCESS MARGARET, HABERFIELD.
 PRIAM ADA MEECH, H.C. (Twice).
 PROFUSION VIOLACIA. (Pink Champion).
 SANDPIPER, PENGILLY. (Lovely Large White, Good Shape).
 SUSSEX, LAELIA SASSO, H.C. (twice) A.D., A.M.
 SWALLOW, CONQUEST, H.C. (twice).
 SWALLOW, DAFFODIL, H.C. (twice), A.M.
 SWALLOW, MAGNOLIA, H.C.

For any 6 of the above 36 plants, £15; for any 12 of the 36 plants, £22; for the whole 36 plants as listed, £60. All plants are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

EXPORT AND WESTONBIRT VARIETIES

Six flowering size green plants (leading green bulbs with leads), all different varieties, £15; per dozen, £25.

SPECIAL: Twelve dozen only young first-year green plants grown from back bulbs (with the back bulbs still attached in nearly all cases), well established, healthy and guaranteed—£16 per dozen, or £150 for all 144 plants.

MAIL ORDERS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS"

Available free on request: Lists the best-known official award varieties, shows awards won and the prices of various size plants.

Haberfield Orchid Nursery

*The Oldest Established Commercial Cymbidium
 Specialists in Australia.*

37 Dobroyd Parade, Haberfield (Sydney), N.S.W. Australia

C. W. BUSHELL, Jr.

UA5895, YX2536

Australian Orchid Review

VOLUME 23

JUNE, 1958

No. 2

The author of each article is responsible for the facts and opinions expressed therein.

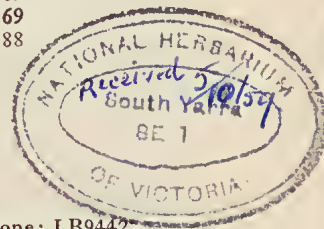
Contents

ARTICLES

Annual Festivals and Shows for 1958	95
Awards, O.S. N.S.W. Ltd.	95
Coelogyne Mooreana— <i>G. H. Slade</i>	93
Cymbidium Culture— <i>J. N. Rentoul</i>	67
Cymbidiums for Export— <i>B. Schwartz</i>	71
Cymbidiums, General Culture of— <i>Fred A. Stewart</i>	89
Cymbidium, The Vandaceous— <i>Don Sherman</i>	79
Dendrobium, Hawaiian Hybrids— <i>Wm. Kirch</i>	80
New Orchid Hybrids	96
News and Notes (Front Cover 68)	22, 79, 94, 95
New Zealand Orchid Enthusiasts— <i>F. M. Slattery</i>	75
Pauwelsii, My	64
Winter Shows (O.S.N.S.W. Ltd. 86)	78

ILLUSTRATIONS

Bouquet for Queen Elizabeth, The Queen Mother	<i>Front Cover</i>
Bouquet for Queen Elizabeth, The Queen Mother (colour)	69
Cymbidium Mayfair 'Stonehurst'	70
Cymbidium Prince Charles 'Pinnacle'	70
Cymbidiums, When and How to Divide	87, 88
Coelogyne Mooreana	70
Miltonia Atina 'Elvira'	69
Miltonia Lady Veitch 'Wondabah'	69
Vandaceous Cymbidium	88



Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA:

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

N. Christoph
18 Clinton Ave.
Myrtle Bank

WESTERN AUSTRALIA:

A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising, neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

My Pauwelsii

• A report contained in the December, 1957, issue of the American Cymbidium Society News by Mr. Joseph Hampton and Mr. Jack Hudlow, who visited Hawaii for the Second World Orchid Conference, has been the topic of conversation in our bush house for some considerable time.

Reference to Australian Cymbidiums was as follows: "The Hawaiian supply of fine plants has been more or less limited. They received many of their early hybrids from Australia, and many of these are diploids. Their flowers are of not too good quality."

This misconception of my brothers and sisters can be explained by one of the interesting orchid stories which has been circulated for many years here in Australia.

Growers in this country have always desired to procure Vandas, and were prepared to pay reasonable prices for members of the Vandaceous tribe, especially when reports that Vandas were grown as hedges in Hawaii were confirmed by returning Australian tourists.

As dollars were unprocurable with which to "waste" for the purchase of orchids, perhaps it was reasonable to assume that some orchid interests would exchange my fellow beings for Vandas and therefore obtain the necessary finance to enable a lucrative business to be envisaged.

Orchid growers in Australia readily purchased the Rothschildianas and Sanderianas of the future with enthusiastic relish, and it was possible that the persons concerned with the exchange system began to diminish their stocks of real Cymbidiums so quickly that it probably became impossible to obtain top line plants here to enable the barter to continue.

The rest of the story is not hard to imagine—it seems as though the Cymbidiums used to continue the exchange must have been procured from unreliable sources; with or without the knowledge of the barterer would be interesting to know.

Surely someone in Hawaii should have written to our orchid societies to ascertain the credentials of the person or persons directly concerned with the proposition.

My confrères and my benefactor wish to convey their sincere sympathy to the unsuspecting Hawaiian purchasers of "the rags from down under", and I am sure that these senti-

ments will be reciprocated after completing this hitherto unpublished true story.

I have often learned many unprintable expressions while listening to a description of a Vanda flower reputed to be of high lineage and yet according to my master—definitely illegitimate!!

A glass house was erected next door to our domain to cultivate Vandas to perfection; and with what little cultural knowledge was then prevalent in Australia—roots all jammed tight in fibre with Sphagnum moss kept wet at all times to promote humidity—how different we now know. Slotted pots or baskets, just crocks, charcoal and some rough tanbark, fertilised each week, bush house conditions in summer and glass house in winter, have completely revolutionised these orchids.

The original first few flowers were suspect though this fact was not proven until two or three years later as I will relate; reference to pictures in catalogues was passed off with the proverbial bed time story—"they fake the flowers to sell their plants."

Meanwhile the plants continued to make progress, although at this juncture—how—my benefactor, as already related, would not now know. An attempt was made to try and fake the flowers to convince amateur photographers that photos lie and not the barterers.

Finally he knew; this was it and as in Hawaii he had a beautiful hedge, though this one was growing in his glass house instead of in the street. The flowers were nondescript and did not do justice to the hedge and, as such, were cut immediately to preserve the dignity of the green foliage.

Have you ever known a hedge to be a success in a glass house? No birds making a nest in it, no caterpillars nor grubs, and most definitely no urchins hiding behind it to drop a coin on a brick to delay an unsuspecting old lady. Though the leaves could have been used to conveniently hang a grass skirt to dry, the only similarity with Hawaii seemed to be the volcanic eruption of my master's vocabulary.

Vandas were mentioned in hushed whispers until the return of Dr. Jim Vote from an overseas trip.

As he began to unwrap his purchases of Vandas from the Pacific we were permitted to feast our eyes upon the real Rothschildianas,

the Nellie Morleys, the Sanderianas and the Vandaceous novelties which had been purchased and not bartered for. It seemed as though real beads, tomahawks and blankets had found their reward, and the period of quarantine was probably just long enough for enthusiasts to place their thoughts and their private form of bartering each in its proper perspective.

Our cultural methods were changed, thanks to the Doctor, and our faith has been restored. I am sure that that same faith will return one day to all the disappointed Hawaiians who may still retain the diploids supposedly to be choice Australian Cymbidiums.

Reports from time to time in the American Orchid Review have proved that most Australian show bench and export Cymbidiums are triploids and some—even tetraploids. The tests were carried out in America, and, as a result, some Australian hybridists have used this information to cross many of the future world's champion parents as will be proven by the crop of seedlings now being grown.

Perhaps orchid growers in both Hawaii and Australia are confused as some American interests boost "the huge *open* flower". If the grower is an enthusiastic supporter of his local orchid society then this open flower is used as a background for the round flower which the judges are looking for in *every country* in the world. The open flower is something entirely different, and the choice of the exporter of flowers.

Modern Cymbidium culture has improved the size of our own Westonbirts to such an extent that they can be classed as huge *round*

flowers and as such would export as well as win championship ribbons.

As the Hawaiian temperature does not fall below 57 degrees, it may be of interest to reveal that Cymbidiums in the Sydney area are flowered in temperatures not above 50 degrees during the winter nights and usually around the 44 degrees mark, which sometimes drops to 40 degrees in the open slat or bush house with shaded glass above the flowers for our estimation of correct flowering. Sometimes amateur growers move their plants into heated glass houses to force the flowers to open for early shows. As the temperature is around the 55 degrees-60 degrees mark it is inevitable that bud drop eventuates, or if the blooms open then their substance is not all that is required and the lasting quality of these forced flowers is very poor.

Mr. Robert Casamajor, in the same issue of the Cymbidium News, describes attempts to hoodwink "a fact that there is a definite relation between leaf production per bulb and flowering . . . people show bulbs where obviously the old sheaths had been torn off . . . this sort of thing comes under the heading of *monkey-business*".

Perhaps the same sharp practice was the cause of the present Vanda-Cymbidium diploid situation, and with so little alteration in Mr. Casamajor's apt heading other than to condense the phrase to "*money-business*", though which side today has the better tomahawk may be hard to imagine.

Culturally speaking,
The Editor's Pauwelsii.

ORCHID SOCIETY OF NEW SOUTH WALES

presents

1958 WINTER SHOW

featuring

THE GRAND CHAMPION CYPRIPEDIUM OF N.S.W.

For the Australian Orchid Review Trophy

ENTRIES INVITED FROM ALL OVER AUSTRALIA

at the

Y.W.C.A. HALL, 185 LIVERPOOL ST., SYDNEY

Monday, 30th June, 1958

DISPLAYS OF EARLY CYMBIDIUMS, MEMBERS DISPLAYS
AND ALL THE MISCELLANEOUS GENERA OF ORCHIDS

OPEN DAY AND EVENING, 2 p.m.—10 p.m.

ADMISSION 2/-

Cymbidium Culture

J. N. RENTOUL

Many orchid growers are prone to imagine that the cymbidium is finished. It is—but only for the people who never were cymbidium growers. We are only on the doorstep of cymbidium culture, and though their preponderance in orchid collections will be tempered by other attractive orchids, the cymbidium will be the mainline orchid for practically all time. That is a considered statement founded on quite obvious reasons.

So let us have a look at another phase of cymbidium growing . . .

DIFFERENTIATION

A very large and complex word has made its debut in the orchid world—differentiation. It is not a nicely constructed or sonorous word, and almost falls into the “gobblydegook” class. In relation to the genus cymbidium it is intended to represent a hypothetical change in the embryonical basal shoots on the bulbs or rhizomes from growths to flower spikes or vice versa. Now do they? Or do they not? After traversing the cycles of growth and habits of cymbidiums we are faced with very many imponderable facts, but the sane conclusion of some twenty years with cymbidiums is that they do not differentiate — they grow and flower.

FORMATION OF THE PLANT

The plant cycle briefly may be summarised as a seasonal growth, a gentle stage to maturity, and then the culminating effort of the plant to spread itself by seed much as other plants do over the face of the district suitable to its habit of living. This, of course, is in addition to its vegetative increase.

It is very doubtful if ten per cent of cymbidium growers have a single plant of a species in their collections, but this is really the place to begin, and a little study of the habits of species cymbidiums indicates that each has its own peculiarities in the production of flower spikes. The shape of each species in plant form is markedly different. The time at which the flower spike is visible varies. One characteristic seems to be constant, and that is the inevitability of flowering in their native habitat. Spikes are not always produced on new growths, as *grandiflorum* seems to mature its bulb first and produce the flower spike from a

mature bulb without it being visible in the immature growth. This could be a climatic difference, as *grandiflorum* is notoriously difficult to flower if the temperature is not low enough to suit. I have seen *Lowianum* flowering in almost indescribable humidity, likewise *Traceyanum* and *giganteum*. Not so *insigne*, which prefers a lush, softer living between those two extremes. Now as all these are bound up in our modern cymbidiums, it is quite obvious that the first of the imponderables is sufficiently large to nullify much sound reasoning.

The plant form of these species varies from the small and almost round bulbs of *insigne* (and most growers will recognise this characteristic in many of their hybrids) to the elongated and flattened bulbs of *Traceyanum*. *Lowianum* form lies somewhere between the two, while *eburneum* and *Parishii* resemble none of the others; rather are they like the half-way stage of any of them.

Generally speaking, the flower spike is visible in the new growth when it is half developed. Commonly it appears in the tough bract on the side opposite the shortest leaf. This leaf is never more than four to eight inches long, and, like the sheathing bract, usually withers away as the plant matures. At times the spike appears even further into the leaves of the plant, sometimes as much as three leaves in. A growth in this position? Never! As the spike swells initially it breaks through the tough bract and begins to put on weight.

A *grandiflorum* characteristic is for the spike to appear horizontally from under a mature bulb and to continue this pernicious attitude to the withering of the flowers. As a matter of fact, the longer it grows the more it droops. *Lowianum* also tends to horizontal spike production, but they can be brought to almost vertical. *Grandiflorum* has a weakness of stem that persists even in some of our better hybrids. *Insigne* and *eburneum* have the opposite flowering habit in that the spikes are very erect and straight, though *insigne* has many more flowers than *eburneum* or *Parishii*.

SHOOTING SPIKES

These preliminaries are to give some understanding why our plant habits vary so much. In most cases they may be traced back to the

species responsible by consulting a hybrid list. But it is not always a preponderance of appearance of any particular species in bloodlines that dictates the flowering characteristics.

The position of flower spikes on the bulb always seems to be different from the position of growth buds. That, of course, is when considering a leafed and unflowered bulb. The flower spike seems to originate on the pseudo-bulb rather than on the rhizome. If not on the bulb, it is higher than the shoots which initiate the new growth. This is more evident when considering the half-grown state of the growth when a spike becomes apparent.

When a bulb fails to mature in time to produce a flower, or where the culture is unsuitable to flower production, and the conditions are the following year amended to suit the plant, a flower spike will on regular flowering varieties almost certainly appear. *But it will not appear where expected.* The tough bract that would normally have been its birthplace has by now long disappeared, and also the shorter leaf on the other side of the bulb. The flower spike then appears in the cradle of the longer leaf *on the other side of the bulb*, and actually two segments of pseudo-bulb higher up. *It never appears lower down on the rhizome, as could be expected if differentiation occurred.*

A partial explanation and contradictory factor could be adduced from that, if a growth has already made its appearance on the flowering bulb.

VEGETATIVE GROWTH

That opens up an interesting speculation on the distribution or aggregation of vital cells in the plant. The factors which initiate vegetative increase and flowering are fundamentally different. In vegetative growth there is the straightforward proliferation of the plant cells to that end. In the flowering development there must be very early sexual alignment of the cells for their components in the flowers. *In this case the differentiation would be at an infinitesimal stage of the bud development, and quite beyond detection.*

There is no doubt that exhaustion of the bulb occurs quickly once it flowers. The degree of exhaustion depends naturally on the general growing conditions, and one of the biggest imponderables, the prevailing weather, regardless of whether the plants are cultivated under glass or outdoors. If a plant vegetatively increases there seems to be an immediate transfer to the newer part of the plant of some vitality at the

expense of the remainder, and with this vitality goes the propensity to flower. The vitality cannot be replaced, but it can be augmented so that last year's flowering bulb will again flower in addition to the new one. But what cannot be replaced is the cellular vigour in the old material. The occasional extraordinary flowering of a waning bulb or even a back-bulb is simply the exception that proves the rule. Nor can we consider the vagaries of mutations.

Back-bulbs are very interesting things to study, as they are devoid of all extraneous material. Anything that goes on is completely visible all the time. Back-bulbs which have a considerable portion of the rhizome attached are more rewarding than those without. Unfortunately, with our potting and cultural methods most of the "eyes" rot before they have a chance to grow. However, a back-bulb will initiate growth from the most unlikely shoots. If some of the rhizome is attached a very much stronger lead will come out of it than from the base of the pseudo-bulb. But it is in the fact that the pseudo-bulb will initiate growth in varying degrees of strength that the sponsors of differentiation may base their strongest case. The strongest of the bulb shoots (quite apart from the rhizome shoots) seems to come from the eye immediately above an old flower spike. As they move progressively up the bulb they become weaker, until the last production appears more as a developing protocorm than a shoot on the side of a bulb. One thing emerges as a certainty from this: *there is no basic difference in the eyes that produce flowers or growths.* Therefore we must look to other sources for the reasons why a plant flowers or not.

INFLUENCE OF NUTRIENTS

The basis of differentiation is the encouraging of a plant to produce flowers instead of growth. *That is the poorest of poor cultural aims.* The aim should not so much be to encourage differentiation as such, but rather to aid the plant to increase vegetatively and still produce flowers. The term differentiation then attains what I assign its true status—it is merely gobbledegook applied mistakenly to plant processes that are normal but one-sided. Perhaps we may say also that it is a term applied in ignorance of the propensities of cymbidiums.

Nutrients are very inefficient if applied haphazardly and without thought or planning. They can be neither completely organic nor completely inorganic, but must be the skilful combination of the two to suit the individual

requirements of individual growers. Just as a gardener can tell you what fertilisers suit certain plants and the difference in soils which can nullify his good advice, so also must nutrients be an individual matter.

Most growers use bone in some form. In Melbourne we are able to procure grit with an analysis of twenty-four per cent phosphoric acid, twenty-eight per cent lime and fourteen per cent protein. It is sterilised and fatless and has no salt content. That is a very good fertiliser and, though it is possible to overdo it, half a cupful to an eight-inch pot gives an admirable basic fertiliser for cymbidiums, not complete, but having the necessary phosphoric content to stimulate flowering.

Many growers hold that excess nitrogen fertilisers stimulate growth at the expense of flowers. They are quite right, but they forget that they must be balanced with other components. After using extremely nitrogenous fertilisers and balancing them out I find that the results leave little to be desired. There is no such thing as differentiation.

It is very difficult to give accurate percentages when a complex fertiliser is worked out over a period of years to suit the plants under control, but the grower who says that he uses nothing to produce his magnificent flowers is a gross prevaricator—to handle him gently.

In most countries of the world, and certainly in Australia, there are procurable many soluble fertilisers. Not all of them are suitable for orchids, but most can be modified and boosted to carry out efficient programmes throughout the growing season of cymbidiums to build plants that will flower and retain vigour even when they are repotted or potted on. If any grower intends embarking on what can be said to be the correct procedure for getting the best from his plants, care should be exercised to keep the phosphorus, nitrogen and sulphur within due bounds. To most solutions may also be added half an ounce of sulphate of potash and a like amount of sulphate or phosphate of iron as a colour intensifier. Again an analysis of the results may be confused by an imponderable—the amount of direct sunlight that the buds receive, and the growth and development rate, which has a very big bearing on that characteristic.

The amount applied to the plant in my opinion should not be such that it needs an emetic or a cathartic to get rid of what it cannot assimilate. That always seems to be the production-line method of high-pressure culture. That method has its limitations. It cer-

tainly gets results, but not for the cymbidium-grower as such. The flood-type application of fertilisers means that wet-culture is undertaken, with all the perils attendant on a turn of the wrong tap or the slightest alteration in strength and hydrogen-ion reading of the solution used. It is far better for the smaller grower to use some part of the fertiliser incorporated in composts and *boost it as necessary in the growing period.*

Repotting is no bar to continued flowering if the plant is handled carefully and given a chance to recover before being forced along. But it must also be stressed that some varieties are harder to flower than others, and allowance should be made for that fact. Some of our very fine cymbidiums are reluctant to either grow or flower, notably President Wilson 'Rapture', Swallow 'Lemon Beauty', Thora, Warner's variety and a few others. This only serves to challenge some people, while others will not be bothered. But the general run of triploid hybrids that have no *grandiflorum* background will both grow and flower well *all the time* if they are given half a chance.

Do they differentiate? As a layman with no scientific background, I say no. We should ask with as much justification if a cattleya differentiates. It doesn't. But please, PLEASE, don't let's bring dendrobiums into it!

—43 Denman Ave., Glen Iris, Victoria.

• **FRONT COVER:**—This lovely bouquet, together with the one in the colour photo in this issue, was made up by Miss Iris Caldwell (Mrs. P. G. Leavers), of Bexley, and photographed by Fred Moulen.

President of the N.S.W. Orchid Society, Sir John Hall Best, was proud to receive this reply from the Lady in Waiting, on behalf of Queen Elizabeth, The Queen Mother.

Dear Sir John,

I am commanded by Queen Elizabeth The Queen Mother to send you Her Majesty's sincere thanks for the beautiful gift of orchids sent from the Orchid Society of New South Wales.

Queen Elizabeth is herself a keen grower of orchids, and is therefore particularly able to appreciate the loveliness of these flowers.

I am also to thank you for your message of loyalty and devotion.

Yours sincerely,

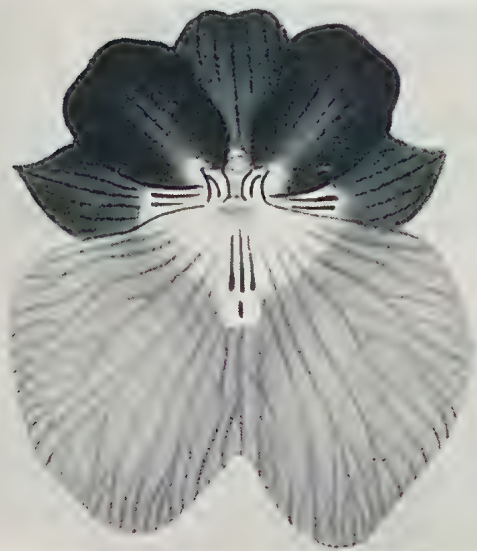
(Signed) JEAN RANKIN,

Lady in Waiting.

A similar reply was received by the St. George Orchid Society.



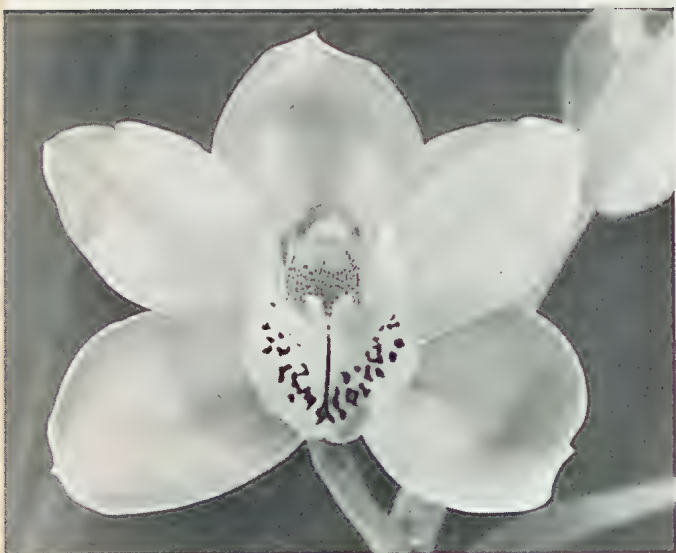
One of the bouquets of orchids sent to Queen Elizabeth The Queen Mother during her Sydney visit. (See text opposite).



MILTONIA LADY VEITCH 'WONDABAH'
A.M., O.S. of N.S.W. Owner, L. Giles. Natural size across petals 3 inches. Purple bloom with contrasting pink lip. Reg. No. 363.



MILTONIA ATINA 'ELVIRA'
A.M., O.S. of N.S.W. Owner, H. J. Lawler. Natural size across petals $3\frac{1}{2}$ inches. Dark purple, mauve lip with lighter veinings. Reg. No. 365.



**CYMBIDIUM PRINCE CHARLES
'PINNACLE'**

Owner, D. Agnew. Interesting flower from English importation. Good textured goldish yellow, apricot pink flushed flower. Lip marked with purple brown spots.



**CYMBIDIUM MAYFAIR
"STONEHURST"**

A.D., O.S. of N.S.W. Ltd. 1957. Owner, J. Chapman. Natural size across petals $3\frac{1}{2}$ inches. Petals and sepals a reddish brown shade, the lip heavily marked with red. Twelve flowers on an arching spike. Reg. No. 356.



**COELOGYNE MOOREANA, BROCK-
HURST VAR.**

See article by G. H. Slade on Page 93.

Cymbidiums for Export

B. SCHWARTZ

I have been asked to prepare a list of cymbidiums suitable for the export market. There is no doubt in my mind as to what constitutes a flower most desirable to the buyer from overseas. First, it must be of a clear colour, fairly large and flat, without spots or marks. The most popular colours are pinks, whites, greens, gold and yellows, with slight variations in the colours which have just been mentioned. Brown, tan or dingy colours will not sell at present.

With the growing of cymbidium orchids to produce blooms for the export market, there is a tremendous amount of preparation in obtaining the best from your plants in order to produce super blooms without spot or blemish to mar the beauty of the flower.

A glass section is an essential to the flowering of cymbidiums. Not necessarily a glass house, but a sloping section of glass running from east to west, with the north side open, the east and west glassed in and the south side brick or fibro. The glass should be covered with bird wire on top to prevent hail damaging the blooms. The glass should be lightly frosted with white wash or any suitable paint, omitting a small section on the east side for the orchids that like the sun, namely, yellows and reds. Underneath the frosted glass, place hessian which has an open weave to permit plenty of light, but not sun's rays, which mar the beauty of most whites and greens. On the section of glass which has not been frosted, place and tie down a light covering of ti-tree for the flowering of reds and yellows.

If you flower plants under these conditions, you should be able to have complete control over the different colours and also prevent most spotting of the blooms.

I think most growers realise the importance of being able to control and prevent damage to the buds when they are about to emerge from the sheath. This is the time to transfer plants from the bush house to the glassed in section, where westerlies cannot damage buds. Most of the spotting is caused by the plants being left out in the bush house, the spikes being blown about, bumping against each other and causing small abrasions which are not noticeable at first, but when the spike lengthens and the buds begin to swell there are to be seen

minute lumps, which, when the flower opens, cause it to be rejected for export.

Another cause of marks on the buds is by aphids and ants. Spray your plants before the buds emerge from the sheath and get rid of all pests, such as ants, slaters, slugs, shell-backs and snails; spray for red spider and fungus diseases. Spray benches, pots and walls with Deildrin or Claudane for ants, being careful not to get the spray on the foliage, as it will burn. For slugs and snails, spray plants with Slugit. Use double strength instead of as suggested on the label once a fortnight for complete control. Spray with Folidol and Zineb, for red spider and fungus diseases, once a month, then, to make sure, should Mr. Snail or Slug get through all these precautions, place a collar of cotton wool around the spike to prevent the buds being eaten.

Having dealt with the type of house necessary to improve blooms for export, shading and the eradication of pests, I would like to offer some cultural hints for growing your plants. In discussing this subject, I would like to point out that I am not pretending to be an authority on the subject of growing cymbidiums. I realise I have much to learn. It is to the novice grower these remarks are mainly directed and written with a sincere desire to assist.

A good mixture for potting is as follows:

- 3 Kerosene tins of new tanbark
- 1 Kerosene tin of old tanbark
- $\frac{3}{4}$ Kerosene tin of coarse sand
- $\frac{1}{4}$ Kerosene tin of charcoal
- 1 Kerosene tin of fresh poultry manure
- 1 Kerosene tin of oak shavings.

Instead of kerosene tins, forty-four gallon drums can be substituted for large collections. The ingredients can be all mixed together, let stand for a fortnight and then used. The feeding of cymbidiums is essential for the export market; in doing so, you get larger flowers and more per spike plus larger plants. The compost is not enough in itself to feed the plant for very long. If you pot in August or September, top your plants with an inch of poultry manure and cover with tan bark (new) during the first week in January, and then once a month repeat until April. Of course, the plants

must receive copious waterings and be kept moist. If allowed to dry out the salts formed will burn the roots.

Plenty of work is required to get the best out of your plants, to produce first-class flowers. You will be amply rewarded though by the excellence and quality of the blooms. After all, we want the very best to go from Australia and so uphold our continued prestige overseas. Do not grumble at the exporter who has at times taken blooms one year and the next year refused them. There possibly could be a late season, and then the early cymbidiums cannot compete with the Westonbirt types, which are considered so much superior. A good idea if you have some early cymbidiums which are on the borderline at the end of August to send overseas is to place them in a heated house when the buds emerge from the sheath and in this way flower them two or three weeks earlier than usual.

Now to the actual flowering of the various colours. I have listed the colours under a code which will be easy to follow.

- A is for white and cream cymbidiums
- B is for green cymbidiums
- C is for pinks and pink flush cymbidiums
- D is for yellow and gold cymbidiums
- E is for red cymbidiums
- 1. is for early flowering cymbidiums
- 2. is for mid-season flowering cymbidiums
- 3. is for late flowering cymbidiums.

For example *Cymbidium* Athens 'Tanandra' is C1., being pink and early flowering; Christine 'Waverley' A2., being white and mid-season; Ceres 'Girrahween' E3., being red and late season, and so on.

A. Whites and creams. These colours should be flowered under frosted glass, such as Balkis 'Luath' and 'Patricia', Dorchester 'Jeanette', Princess Astrid 'Dorothy', Atlantes 'Bellevue' and so on.

B. The greens flowered under frosted glass, with the addition of hessian stretched tightly underneath the glass roof, will allow ample light to penetrate through and at the same time provide adequate shade. It must be remembered that the blooms must be large for export and if you provide too much shade the tendency is to deepen the colour and cause the bloom to be smaller.

C. Pinks and pink flush blooms require lightly frosted glass with plenty of light being able to penetrate the glass. Pink Beauty, Edzell 'Elizabeth', Arabella 'Magnificent', Lustrous 'Betty' and so on, flower excellently under

these conditions.

D. Yellows and E. Reds require strong light, but not direct sunlight, as this causes an ugly brown striping on the back of the dorsal and spoils the bloom. The section of glass that was left unpainted, but which has light brush on top of the wire netting over the glass, is the place to flower reds and yellows. Flowered under these conditions, the yellows are of a very deep colour, particularly Swallow 'Daffodil', which, when grown properly, is an exceptionally fine export orchid. Another is *Memoria Albertii* 'Albert', only with this one, as soon as the buds have opened, place under heavy shade, or you will lose intensity of colour. Jason 'Marblethorpe' is another exceptionally fine export orchid which, when flowered under clear glass, with brush on top, gives you a large flower of a lime yellow colour. If flowered under frosted glass with hessian underneath the glass gives a smaller flower, but also a clear green.

There are a few orchids I would like to mention as first-class export orchids and they are as follows: Early—Adrienne 'Lugarno', Anna 'Sailor Bay', Atlantes 'Bellevue' and 'Girrahween', Burnham Beeches 'Betty Bolton', Buckingham (an early pink, the crossing is Curlew x Butterfly, a beauty), Clarissa 'Margaret', Grand Monarch 'Exquisite', Jacqueline (a lime yellow and a large flower), Jason 'Marblethorpe', Minivet, *Lutescens* 'Yagoona', Pink Beauty and Southborough 'Lugarno'. Late season—Arabella 'Concordia', Cornucopia, Historian 'Roy Harvey's'. Merlin 'Kirribilli', Bernadette, Cooksbridges and Rambodas are mostly early to mid-season and are all excellent orchids for export.

I realise there are many fine orchids omitted from the list, in fact, there must be hundreds; a large quantity of seedlings have flowered and the crosses have not been registered. The list is simply a guide as to what is required for export if flowered as advised.

- C1. Acis 'Waverley'
- B1. Adrienne 'Lugarno'
- D2. Adele Sander 'Narcissus' and 'Margot'
- C1. Alcantara 'Cameo'
- C2. Aldis Lamp 'Arncliffe'
- A2. Alexanderi x Alexanderi
- C1. Alhambra
- C1. Amberley
- A2. Anna 'Sailor Bay'
- A2. Anthony Evans 'St. Mellons'
- A2. Anthony Evans 'Sherwood'
- D2. Apollo

- C2. Arabella 'Magnificent' and 'Waverley'
- D3. Arabella 'Concordia'
- B1. Armynell
- C1. Athens 'Tanandra'
- A1. Atlantes 'Girrahween' and 'Bellevue'
- B1. Aurella 'Sea Swirl'
- C2. Ayot St. Peter 'Carlingford' and 'Isobel'
- C2. Babylon 'Castle Hill'
- D2. Baldur
- A2. Balkis 'Luath', 'Patricia' and 'Jeanette'
- A2. Balkis 'Margot' and 'Kamalradi'
- D2. Balkis 'Elaine'
- A2. Balkis 'Cronulla'
- A2. Bernadette
- B2. Bodmin Moore 'Gwenda'
- A2. Bodmin Moore 'Clare'
- D2. Bodmin Moore Others Yellow
- C1. Bowerbird
- D2. Bramling
- C2. Brolga
- D2. Brissie 'Evelyn' and 'Grace'
- D1. Burnham Beeches 'Betty Bolton' and 'Waverley'
- C1. Buckingham
- D2. Cariga 'Sorrento', 'Julia', 'Belfields' and 'Castle Hill'
- C2. Carisette
- A2. Cassandra 'Toxteth', 'Exquisite', 'Jennifer', 'Tarragindi', 'Evadne', 'MacArthur'
- D2. Celeste 'Luath'
- B1. Celia 'Tanandra'
- E3. Ceres 'Girrahween'
- C1. Charm 'Rooseveltdt'
- C1. Charmanda
- C1. Charmador
- C2. Chepstow Castle
- A2. Christine 'Waverley'
- A2. Clare Armstrong
- B1. Clarissa 'Margaret'
- B1. Clasina de Wit
- C2. Clymene
- C1. Colinette
- C2. Cooksbridge 'Elvina' (Others Yellow and White)
- A2. Cornucopia
- B2. Cygnus 'Opalescence' and 'Aurella'
- A2. Cygnus 'Auriflame', 'Aure' and 'The Bride'
- B3. December Green
- D1. Dobrena
- B2. Dorama
- A2. Dorchester 'Jeanette' and 'Carlingford'
- B2. Drusilla
- A2. Eagle 'Snow Queen' and 'Elizabeth Ann'
- C2. Edzell 'Elizabeth'

- C2. Edith Sasso
- B1. Ethel Ward
- C1. Euterpe 'Churchill'
- B1. Erica Sander 'Tanandra', 'Gloria' and 'Sailor Bay'
- C2. Fairy Princess
- B2. Falcon 'Leone'
- A2. Falcon 'Illawarra'
- E2. Faust 'Flambeau'
- B2. Finetta
- C2. Flamingo 'Allambie'
- C1. Flamingo
- C1. Francis Barbour
- B2. Galaxy 'Willow Tree' and 'Sutherland'
- C1. Gaye
- D1. General Montgomery
- B1. Gibraltar 'Wondabah'
- B2. Girrahween 'Elaine', 'Cronulla' and 'Gloria'
- A2. Girrahween 'Red Star'
- E2. Girrahween 'Enid'
- C2. Gloriana 'Tudor Rose'
- D1. Golden Eagle
- 2. Goosander (Yellow and White)
- B2. Gossoon 'Karbarli', 'Ariadne' and 'Eau-de-Nil'
- D2. Gossoon 'Sailor Bay'
- Grace Mitchell
- B1. Grand Monarch 'Exquisite'
- B1. Guelda 'Tanandra'
- B1. Helen 'Westmead'
- C1. Henry Davis
- A2. Historian 'Burns' and 'Lindfield'
- D1. Icarus
- B1. Ilex
- D2. Imbros 'No. 6'
- C2. Imbros 'No. 7'
- B2. Imbros 'No. 10'
- C2. Inamorata 'Pink Pearl' and 'Karua'
- C2. Independence Day 'Girralong'
- C1. Iphigenia
- D2. Irish Melody
- B2. Irish Mist
- A2. Isabel Sander
- B1. Islander
- B1. Ispahan 'Mascot'
- C1. Ispahan 'Rose Pink'
- C2. Istambul 'Isabel'
- A2. Ixtaccihuathl
- B1. Jacqueline
- B2. Jade
- C2. Janine
- B2. Jason 'Marblethorpe'
- D2. Jason 'Golden Glory'
- C2. Joan Luth
- A2. Joy Sander 'Don'
- D3. Joy Sander 'Ruth'

- D2. Joy Sander 'Canterbury'
 A1. Jungfrau 'Felicity' and 'Lugarno'
 A2. Kairouan 'Karess'
 C1. Kookaburra 'Pink Pearl'
 C1. Kuruns
 D1. Lady Moxham 'Lucy Begbie'
 A3. Laelia Sasso
 C2. Louis Sander 'Kirribilli', 'Regal' and 'Girrahween'
 D2. Louis Sander 'Mildred' (Buff Colour), and 'Karabella'
 A2. Louis Sander 'Waverton'
 D1. Lucy 'Lemon' and 'Hawleys'
 A1. Lucy 'Cruikshanks'
 B1. Lucy 'Porters'
 D1. Lucy 'Macdonalds'
 C1. Lustrous 'Betty'
 B1. Lutescens 'Yagoona'
 A2. Lyasias 'Chastity'
 C2. Madder Rose 'Sailor Bay'
 A2. Madonna 'Royces'
 C1. Magog 'Cameo' and 'Jenny'
 A2. Margaret Hanbury
 D2. Marmie Kingsford 'Erin'
 D2. Mary Ekert
 C1. Mallow 'Mallow'
 B1. Mary Sander
 D2. Memoria Albertii 'Albert'
 A3. Merlin 'Kirribilli'
 D1. Minivet
 C1. Minnabel
 D2. Miranda 'Maisie'
 B2. Miranda 'Shead's'
 A1. Moonbeam
 A2. Moonstone 'Royces'
 C2. Monica 'The Finest'
 A2. Nadina
 A2. Nam Khan
 A1. Nigretta
 D2. Nirvana 'Warringal'
 A2. Olympus
 C1. Oostaker
 1. Oscar Persson
 A2. Pearl 'Jennifer' and 'Magnificum'
 C1. Peregrine
 C1. Pink Beauty
 B2. President Wilson 'Rapture', 'Lime Green' and 'Pengilly'
 B1. President Wilson 'Concolour'
 A2. President Wilson 'Ada Meech'
 C1. President Wilson 'Round Pink'
 A2. Prince Charles 'Sorrento'
 A2. Princess Astrid 'Dorothy'
 A2. Princess Elizabeth 'Herne Bay', 'Gillian', 'Maisie', 'Shead's Giant' and 'Shang-ri-la'
 C1. Princess Juliana
 A2. Princess Margaret
 B2. Radak
 B1. Ramboda 'Lindfield', 'Tussore', 'Adonis', 'Majestic', 'Bayview' and 'Merri-long'
 D2. Regina 'Cronulla' and 'Lady Coleman'
 A1. Reginald 'Roseum'
 C1. Regulus 'Queen Mary'
 B2. Riga 'Jungle Princess'
 C2. Rio Rita 'Radiance'
 C2. Rosanna 'Pinkie'
 D3. Ruskin 'Renown' (Buff Colour)
 A2. Roxana
 C3. Royal Duke 'Majestic'
 C2. Ruanda 'The Finest'
 C1. Ruby Queen
 B1. Rusper 'Waverley'
 C3. Sandpiper 'Dorothy'
 D3. Sandpiper 'Swinnington's'
 A1. Schlegelii 'Lugarno'
 D1. Sedgewick
 B2. Shiraz 'McBean's' and 'Her Majesty'
 B1. Siskin
 C1. Skymaster 'Girrahween'
 C1. Solon
 C2. Sonia
 B1. Southborough 'Lugarno'
 B2. Stonechat 'Elouera'
 D1. Sussex 'Laelia Sasso'
 B1. Sussex Moor
 D1. Swallow 'Desert Gold', 'Daffodil' and 'Chiang-ki-Chek'
 C2. Swallow 'Kingsford'
 A2. Swallow 'Magnolia', 'Ronnoc', 'Soul-angeana', 'Bellevue' and 'Hebe'
 B1. Swallow 'Rainbow' and 'Lemon Beauty'
 D2. Swallow 'Jill' and 'Sunset'
 A3. Swallow 'Korea'
 A2. Swallow 'Dainty' and 'Valley Vue'
 B2. Vangie
 D1. Venustula
 D1. Verulam
 C2. Vieux Rose
 B1. Water Rail
 A2. Windrush 'Dionne'
 C1. Windsor Castle 'Sailor Bay'
 D1. Woodpigeon
 D1. Wylan 'Sailor Bay'
 —1178 Forest Rd., Lugarno, N.S.W.

• **SILVER MEDALS**:—All Societies and Clubs which compete at the O.S.N.S.W. Ltd. Festival are to be granted a Silver Medal for competition at their own annual show.

New Zealand Orchid Enthusiasts

F. SLATTERY

My departure from Sydney on January 13th, 1958, with the T.E.A.L. plane for New Zealand, was the beginning of a tour to regain my health and strength after some weeks of convalescence.

With the bush fires, water restrictions, and the Sydney temperatures around the ninety mark, I was quite unprepared for the complete reversal of conditions that I encountered in my first New Zealand town.

Auckland, as in any other community, has its orchid enthusiasts. On arrival I was the guest of the N.Z. Orchid Society Inc. at the Auckland University, where I had the pleasure of attending their meeting as the guest speaker on January 15th. I spent several hours showing Kodachromes and describing many of our well known Australian champion orchids as well as views of many collections and shows. The District Exhibits from our N.S.W. Orchid Festival created intense interest, and although I needed three short intervals the clock showed 11.30 p.m. as I switched the projector off.

I was quite surprised to learn that the N.Z. Society has about three hundred members. The capable President, Mr. W. Potter, and Secretary, Mrs. L. Kershaw, no doubt are contributing factors to the undoubted success of the Society.

Some fine plants were displayed at the meeting. I noted *Miltonia Armanda* x *Aurea* (two plants), *oncidium spacelatum* which was a large specimen plant, *dendrobium moschatum*, *brassia verrucosa*, and several others.

Visiting various enthusiasts in and around the Auckland district I saw many fine collections. In the Domain Gardens I was shown their wonderful glasshouses of tropical plants and tuberous-rooted begonias, etc., by Mrs. Barry Cleland, who was my guide and hostess for the day. Here I met Mr. J. B. Douglas, Editor of the N.Z. Orchid Review. I was conducted through the orchid glasshouses where a large collection of miscellaneous orchids are grown. Cattleyas, cymbidiums, cyripediums, odontoglossums, selenepediums, coelogynes, and many other varieties too numerous to mention were all thriving. It was here also that I saw the largest plant of *sobralia macrantha* that I have ever seen. This plant was carrying dozens of flowers with many unopened buds. I saw

many old favourites among the species grown and I was loth to leave this wonderful collection. The Auckland Parks and Gardens must have plenty of civic pride to look after this profusion of plants.

Returning with my hostess for dinner with Mr. B. Cleland of Blackhouse Bay, I spent a delightful afternoon with my hosts and their lovely family looking through their collection. Cymbidiums, cyripediums, cattleyas, phalaenopses, vandas, miltonias and odontoglossums were all growing well under ideal conditions. There are many seedlings of various genera in this collection and some fine flowers should result in time to come. Among others there was one very fine cattleya in bloom, namely L.C. Castle of Mey of very rich mauve colour, dark purple lip and fair shape.

For the next two days I was the guest of the N.Z. President, Mr. W. Potter, who very kindly enabled me to see various collections as well as the Auckland beauty spots. We called on Mr. George Clarke of Mission Bay, who is one of the veteran N.Z. growers. Many wonderful plants were seen in this collection, including the largest specimen plant of *vanda coerulea* I have ever seen. The plant was twenty-five years old, seven feet high with four leads or kei-keis. This plant has already produced two thousand two hundred and sixteen flowers at an average of one hundred and fifty-eight per year; it is grown in a heated glasshouse with the temperature never falling below fifty-eight degrees yet climbing to ninety degrees in the summer, and has never been exposed to full sunlight. Space does not permit me describing all the plants and flowers in this lovely collection though I must mention *cochlioda Noezliana*, cattleya *fulvescens*, *Miltonia Hyeana*, *Cyripedium Albion* x *F.C. Puddle*, and *dendrobium moschatum*.

Entertained one evening by Mr. & Mrs. Eric Prince at dinner in their lovely home on the slopes of Mount Eden with a wonderful view of Auckland and its harbour, I was enthralled by the scenic beauty. Mr. Prince's collection of mainly cymbidiums was very well grown and together with many seedlings showed promise of a good flowering season.

Once again, with the President, Mr. W. Potter, I was taken to view many collections.

Mr. Len Jones, a retired dairy farmer at Mangere, and his wife had a lovely collection of cymbidiums, cattleyas, cirrhopetalums and vandas in flower. I particularly noted *Vanda Gertrude Miyamoto* for its rich golden colour. Mr. Jones, as well as being a fine grower of tuberous-rooted begonias, must surely be an artist of some note as I saw some very fine oil paintings of begonias which would not be disgraced in any company.

Meeting Mr. & Mrs. F. Daniels at Mission Bay, I saw yet another fine well grown collection of orchids. Cattleyas and cymbidiums were grown in separate houses with excellent results being obtained from a modern feeding programme. The Kodachromes of these orchids were very interesting.

Entertained by the President and his charming wife for dinner also gave me an opportunity of viewing Mr. Potter's collection which was in the small stage as yet. Cattleyas and miltonias seemed to be growing very well. It was from this collection that the two miltonias and the *oncidium spacelatum* exhibited at the N.Z. Orchid Society meeting were produced.

At the kind invitation of Mr. & Mrs. B. Cleland I was fêted at their beach home at Paihia on the west coast. This well known surfing resort is situated about thirty miles from Auckland and is most famous for its beautiful scenery. A very pleasant week-end was spent with these kind folks and I now began to feel the benefits from the continued amazing hospitality which I was encountering.

My return to Auckland contained yet another surprise as the President had already arranged to take me on a tour of Rotorua and other inland towns. Together with Mrs. Potter we set out on this trip of five hundred miles or more. My earnest advice to intending N.Z. visitors is to engage Mr. Potter and Mr. Cleland as navigators. These gentlemen have no trouble finding their way providing you are with them to show them where to go!!

Rotorua with its hot springs, boiling mud and geysers, together with the wonderful Government Gardens, must be one of the world's wonders.

I had the pleasure of seeing one of the finest collections of cymbidiums I have ever encountered at Mr. & Mrs. Hepburn's home at Whakatane. Growing in a glasshouse on the mountainside, facing north, were more than two thousand flowering plants as well as unflowered seedlings and smaller plants. They were grown in a compost of fibrous loam, rotted bark and

cow manure. Dozens of flower spikes were showing and the plants all looked very vigorous and healthy. This locality favoured earlier flowering than other districts. The glasshouse was two hundred feet long and foundations for an additional hundred feet were already in position. Some considerable time was taken to view Kodachromes of this collection wherein most of the latest English and American crosses have been flowered. Space does not permit me to name them all but as I was generously given some slides of the collection I shall have the pleasure of showing them to Australian enthusiasts. I noted two smaller glasshouses containing cattleyas though I was more interested in this amazing cymbidium collection. After being entertained and nourished once again we took our leave of our hosts, who had already made accommodation arrangements for us back in Rotorua.

The trouble that N.Z. people went to on my behalf to make my visit more enjoyable was little short of fantastic.

Next morning we said our farewells to Rotorua and visited the famous Fairy Springs and Trout Streams before proceeding to Matamata, a beautiful town in the heart of a rich dairying and pastoral district. We called on Mrs. Blake and saw some very fine vandas, among which I noted *Vanda Gilbert Triboulet*, *Carole Hirano*, *Mary Foster x coerulea*, *Batemannii x Renanthera Monachica*, and *Aerides Hermon Slade*. This glasshouse was one of the cleanest I have ever seen, which showed the intense interest of the grower.

In this same town we visited Mr. J. Gardiner, who is one of the oldest growers in N.Z. Here I saw a fine array of specimen plants of cattleyas growing in Punga, which is a N.Z. tree fern. The trunk of the tree fern is cut into lengths of ten inches or more. The centre is sawn out and the outside of the trunk becomes a pot-like receptacle. The centre is used as a batten or stand with the resulting natural basket for orchid growing. Some of the plants carried up to thirty-six blooms. I also noted some very nice odontoglossums and odontiodas growing in a similar fashion. *O. Mayflower*, a wine red colour, and an exceptionally nice pink odontonia, even though the label had been lost, were very pleasing. This grower uses powdered milk, $1\frac{3}{4}$ ounces to 1 gallon of water, on the plants which certainly does them no harm as their culture seemed excellent. There was also a lovely collection of tuberous-rooted begonias and fuchsias in two hundred different

varieties. As time was progressing rapidly we said farewell to this fine old gentleman under the familiar "Scotch Terrier Angus" sign at his gate. The accompanying words "THE GARDINERS LIVE HERE" was a very true epitome, for it was indeed a pleasure to meet and discuss the various methods of culture from which one never ceases to learn.

Back again with Mr. & Mrs. Cleland in Auckland, I found that Mr. Eric Prince had booked me a seat on Land Lines Tours for a trip around the North Island of New Zealand. My fellow passengers, who all showed great pride in their wonderful country, helped to make a delightful trip for a day through ever-changing scenery which is one of the charms of travelling in New Zealand.

Breaking my journey I visited Palmerston North which is one of the N.Z. inland cities and is built around a garden square with the railway in the centre of the city itself.

Here I visited the well known Harrison Nursery, where I was entertained by Mr. and Mrs. G. Harrison. Mr. David Goudie, who cares for the glasshouses, escorted me around the many points of interest. The firm had a fine collection of cymbidiums which were growing in an open compost in beds in a glasshouse and were doing quite well. Watering was carried out with a time clock system which turned the mist sprays on at pre-set intervals.

A tour through the Palmerston North famous esplanade gardens enabled me to meet Mr. Malcolm Macdonald, the curator of the glasshouses in which a few orchids are housed. They are on display to the public when in flower and follow the practice as in all N.Z. public gardens. I visited the famous Massey Agricultural College and saw their notorious collection of trees, shrubs and flowers growing on the many acres upon which this College is built. An interesting discussion with the gentleman in charge of the propagating department about polythene as an insulation provided much food for thought. He thought that polythene was excellent and was now using it instead of glass while one of the houses was being re-glazed.

I was the guest of Mr. and Mrs. David Goudie at dinner and stayed at night with my hosts and lovely young family. I had the pleasure of showing Kodachromes that evening to Mr. George Harrison and son, and Mr. and Mrs. David Goudie and friends. This was a delightful evening spent discussing the culture of orchids both in Australia and New Zealand.

Taking leave of my hosts next morning I went to Wellington where I visited Mr. Poole, a nurseryman at Lower Hutt. Here I saw a mixed collection which included cattleyas, odontoglossums, cypripediums, tuberous-rooted begonias, fuchsias, and with cymbidiums growing in a lattice roofed enclosure, one of the few places where cymbidiums were grown in similar N.S.W. conditions. The plants were growing very well though they had to be wintered under glass. It was here that I had the pleasure of meeting Mr. and Mrs. Terry and Mr. Campbell. We had an interesting discussion about the culture of their plant, *disa grandiflora*, which I trust eventually reaches maturity.

In the capable hands of Mr. H. Rudolph of Eastborne, an ardent hybridist, I was entertained at dinner and shown an interesting collection of all types as well as many thousands of seedlings in all stages of growth. This grower's glasshouses are all perched on a steep hill facing the harbour. Various formulae have been used with the different genera, and some odontoglossum seedlings, a very rare sight, proved the undoubted ultimate eventual success of Mr. Rudolph.

After an interesting discussion with my hosts I returned to Wellington and spent the weekend sight-seeing the city and beaches.

Leaving Wellington on Monday, I journeyed around the Island towards Auckland by way of Wanganui and several other places of interest. At New Plymouth I was honoured to meet Mr. Fred Parker, who is one of the well known horticulturalists of N.Z. Here, in his delightful gardens and glasshouses, it seemed that every conceivable plant and shrub was grown to perfection and so placed in tiered banks that the uninterrupted view was delightful. In the orchid department I noted in flower *Miltonia Imperial* 'Etta', a nice deep red; *Miltonia Woodlands Alba*, and several nice odontoglossums and odontiodas. This grower had cymbidiums growing in an open bed in a bush house, where they grow all the year and lacked nothing by this unusual N.Z. treatment. Tuberous-rooted begonias and fuchsias seemed to revel in their treatment.

I was taken on a tour of the district by Mr. and Mrs. Fred Parker and Mr. Russell Mathews, and shown some magnificent private gardens. Mr. and Mrs. Bishop of Stratford had several acres of beautiful trees, sweeping lawns and flower beds all arranged in a delightful setting complete with their own stream

meandering through the garden. Mount Egmont, in this district, provides the many delightful mountainous streams, most of which are stocked with trout. The snow clad peak is a natural source of water supply for this paradise.

Visiting Mr. Russell Mathews I was once again enthralled by the scenic beauty. Here in fourteen acres another beautiful garden was set in a natural valley complete with every variety of tree, shrub and rhododendron.

The tudor style home had all the eaves and window casements, etc. hand adzed to complete the rustic beauty of this wonderful garden. Here again the inevitable stream completed nature's handiwork.

Returning to New Plymouth I was the guest of Mr. & Mrs. Parker at dinner, and at my hotel later that night I decided that if I ever settled in N.Z. I would choose New Plymouth. Perhaps it was the people, perhaps the gardens, I do not know. I do know that this combination would be my ideal of Eden.

My return to Auckland by way of Mount Messenger was completed through ever changing scenery, and once again Mr. & Mrs. B. Cleland were kind enough to provide the "welcome back." After a day or two to rest from the events of the past weeks I visited more growers. One of the past Presidents of the N.Z. Orchid Society, Mr. Geoff. Laird, had a nice mixed collection. Cymbidiums were grown in large boxes in the open air with the sun beaming on them all the year. They were all placed around a tennis court, and along the front of the home grew an outstanding collection of reed type epidendrums; their many various colours made a beautiful sight. I also noted here some fine plants of *laelia anceps* and vanda *Sanderiana alba*. Here again a fine selection of English cymbidium seedlings were growing quite well.

The Secretary of the N.Z. Orchid Society, Mrs. Kershaw, and her husband, had a nice collection of various genera and especially noteworthy were their fine odontoglossums. A cacti collection at this home would probably be unequalled anywhere.

I visited the famous Sir Frank Mappin home and garden situated on the slopes of Mount Eden. In twelve and a half acres of delightful gardens I became mesmerised with my surroundings. Mr. Bert Blumhardt, the head gardener, conducted me through the glasshouses where a large collection of odontiodas, odontoglossums, cattleyas, cymbidiums, cyripediums and many others were being grown to perfec-

tion. I noted L.C. Melrose and L.C. Hertha in flower, also some of the rich coloured odont family. It was only natural that I spent some considerable time at this lovely spot.

My next journey was to Henderson, where I met Mr. Fred Powell, another of the veteran growers of N.Z. What a fine grower this gentleman is and what a wealth of knowledge he possesses!! His cyripediums were a picture to look at and they were nearly all large specimen plants. Some of the varieties noted were C. Rossetti, Fowler's Var.; C. Rosy Dawn; C. St. Albans; C. Albion, and many new modern hybrids. Also in flower I noted miltonias *Lycaena* and *Pulchra*, *oncidioda Charlesworthii* and *sobralia macrantha*.

This grower had also a large collection of crotons, many of which he had hybridised himself. After spending some time viewing the Kodachromes of his collection I reluctantly took leave of this fine old gentleman, though now I was ever so much wiser in knowledge.

My N.Z. trip was nearly completed; I would have liked to stay and visit other growers but there were simply not enough hours in a day. On my final evening I was entertained by my hosts at a house party given in my honour by the N.Z. Orchid Society. This was a complete surprise and a fitting climax to a delightful holiday in a lovely country; a country filled with hospitable and warm hearted people so natural that I have returned in good health and also much more learned. I can only say that may they one and all live long to enjoy the pleasure of bringing to perfection their beautiful plants.

—12 Eddystone Road, Bexley, N.S.W.

• **WINTER SHOWS.** Many promising minor "festivals" are promised by various Societies for their Winter Show presentations.

The following dates have been announced:

N.S.W. Orchid Society Ltd.: Y.W.C.A. Hall, 185 Liverpool Street, Sydney, 30th June.

North Shore Orchid Society: Chatswood Town Hall, 4th and 5th July.

Sutherland Shire Orchid Society: Kindergarten Hall, Miranda, 5th July.

Parramatta and District Orchid Society: Grace Bros.' Building, Parramatta, 7th July.

St. George Orchid Society: Hunt Bros.' Building, Croft's Avenue, Hurstville, 11th and 12th July.

Newcastle Orchid Society: Masonic Hall, Beaumont Street, Hamilton, 25th and 26th July.

The Vandaceous Cymbidium?

DON SHERMAN

•
•
• Cymbidiums are indeed interesting orchids as any experienced hybridist will state.

This report is of a cross flowering for the first time this year at Sherman Orchid Gardens, which has created more than usual interest around the nursery. It is our cross L-826, Alexanderi 'Westonbirt' F.C.C., R.H.S., x Beatrice 'Superba'. Alexanderi 'Westonbirt', which still holds top place as the stud plant of all time, is a tetraploid with definite reproduction patterns well known to all cymbidium hybridists. The inherent ability of this most outstanding stud plant is quite obviously due, not only to the fact that this is a tetraploid, but to the overpowering influence of the genes which, in the final analysis, are the determining factors in the basic make-up, both inward and outward, of all reproduction forces. This plant is, in this respect, similar to a *true* species . . . that is, it will dominate and influence *all through* the lineage in all future hybrids wherever or whenever it will have been used.

Beatrice 'Superba' (parentage unknown) is an old-time hybrid that is noted for its free flowering characteristics and strong growth habit. The flower of this variety is very large, approximately five inches, of good substance and form, flat and well displayed on a good spike. Beatrice 'Superba' also has a tendency to put out spikes from the leaf axils and obviously has been the influencing cause behind these seedlings to make them grow and spike in the unusual manner of these reported below.

The seed of this cross was harvested and planted approximately five years ago and now this season the first plants are in spike. This is not unusual, but the thing that prompts this report is that the first plant to show a spike is a single growth which started to make up its bulb but is still growing and putting out new leaves and is growing taller all the time.

When first noted, around July 1957, this single growth plant had six spikes showing. The spikes were coming out from both sides of the plant and from the base of the leaf axils. The plant continued to grow and as growth continues, so do flower spikes. The plant now has produced forty-two leaves and is apparently not finished yet. At the latest count, thirteen spikes in all have been observed. Six of the

early spikes burnt off, due for the most part to the high heat of summer, while the earlier of the others are soon to start opening the first flowers. The buds look fine . . . the plant is still growing . . . how many more spikes, how many more leaves, if any?

This individual plant's production is most startling as an oddity . . . but is it so odd? There are other plants of this same cross growing almost identical. They are approximately as follows:

One plant, thirty-six leaves visible, nine spikes produced, still growing.

One plant, thirty-seven leaves, four spikes and two growths, first bulb apparently finished growing.

One plant, thirty-one leaves, two spikes, first bulb apparently finished growing.

Several other seedlings of this cross on single growths or bulbs have two and three spikes. Perhaps this is the perfect idea of a cymbidium with vandaceous growth and spiking habit, capable of producing many spikes within the axils of the leaves.

We here at Sherman Orchid Gardens have made and registered over a hundred new cymbidium hybrids to date, and although we have seen other seedlings show several peculiarities at first flowering (such as spikes from the top centre of the bulb, etc.), this is the first time for such as this.

What will these seedlings do next season? It is going to be very interesting to follow the development and performance of these plants.

P.S. On the first seedling to flower, the flower was a very beautiful white with a hint of green and a most vivid red coloured lip. The flower is flat, of good form and balance. It is of excellent texture with the very heaviest substance . . . harder and thicker than the famous pentaploid, Flamingo 'Nobilior', F.C.C., if that is possible.

—Grand Avenue at Gladstone, Glendora, California, U.S.A.

• A membership of the N.S.W.O.S. Ltd. will ensure this Review being posted to your home. A monthly circular keeps you informed of all N.S.W. orchid news. Secretary K. D. Lamont will post the necessary information you may need.

Hawaiian Dendrobium Hybrids

Wm. KIRCH

Dendrobiums constitute one of the largest sections in the orchid family. They are extremely diverse in type. Many sub-sections would easily provide material for an article in themselves. Actually, we will do just that with this material.

Hawaiian Dendrobium hybrids have been built mainly in one large sub-section of the genus "*Dendrobium-Stachyobium*". The most famous species of this sub-section is one well known to most orchid growers—*Dendrobium phalaenopsis*. Actually, the capricious character of this species has been the stimulating interest in producing the modern Hawaiian dendrobiums. We will attempt to develop this theme as we proceed.

D. phalaenopsis, its varieties, near species like *D. bigibbum*, natural hybrids like *D. superbiens* or *D. Goldei*, all have presented cultural difficulties to orchid growers the world over. Many years ago these Dendrobiums constituted a major cut flower crop. They were discarded through the years in favour of other types of spray orchids. It was not a lack of floral beauty that caused their ill favour, but rather an unwillingness on the part of the plants to co-operate with the grower. To-day, *D. phalaenopsis* and its near types seem to be staging a minor comeback. A better understanding of their requirements plus a generally improved understanding of their culture contribute to this.

D. phalaenopsis in its normal form is represented in most collections today. Actually, this would be more correctly named as *D. phalaenopsis* var. *Schroderianum*. Its origin is the Pacific Island of New Guinea. The type of this species is distributed in Northern Australia, where it is known as the "Cookstown Orchid". The type is quite inferior to the variety *Schroderianum*.

Most of the *D. phalaenopsis* grown today are the product of artificially grown seedlings. Selections for colour and shape have led growers to continually select those types more nearly representing the variety *Schroderianum* than the type species. Nurserymen through the years have dropped the varietal name. This helps to explain the great disappointment many have experienced when importing the type species from Northern Australia, only to find it did not measure up to their expectations.

The species *D. Phalaenopsis* has some *alba* forms. These, in past history, have been very expensive plants. Three original named varieties stand out as parents of many of the better modern strains. They are, namely, *D. phalaenopsis* var. *Phyllis Moore*, *D. phalaenopsis* var. *Schroderianum alba* and *D. phalaenopsis* var. *Holeleucum*. Crosses between these varieties have produced pure strains of *alba* forms. By producing them from seed, it has been possible to offer them at moderate prices. *D. phalaenopsis* var. *Mauna Kea* (White Mountain) is an example. This is the hybrid strain produced by crossing *D. phalaenopsis* var. *Phyllis Moore* with *D. phalaenopsis* var. *Holeleucum*. Some forms are pure white and others show a slight tinge of pink in the lip like the *Phyllis Moore* parent.

Another variation in the *alba* forms is *D. phalaenopsis alba*, Lyon's type. It is a product of continued self breeding of light forms of *D. phalaenopsis* to produce albinism. This strain is the product of many years of breeding by one of Hawaii's outstanding amateur orchid growers, Dr. Harold L. Lyon, retired director of the Hawaiian Sugar Planters' Association. It has proven a fine parent as generally it imparts great vigour to its offspring. No doubt this is due in large measure to the purity of the strain. Thus, we get a similar reaction to that achieved in hybrid corn. It has actually produced pure white forms in some of its hybrids. An example is *D. Caesar* (*Phal. alba*, Lyon's type x *D. stratiotes*). In this instance both parents show a considerable amount of colour.

D. phalaenopsis Miyamoto's type shows the result of crossing *D. phalaenopsis*, similar to Lyon's type with the pure white form of *D. phalaenopsis* *Holeleucum*. More and more it is coming to light that *D. phalaenopsis* in the *alba* form is a valuable parent for colour intensity. Such would not seem logical on the surface. One might expect a dilution of colour using one white parent and one coloured form. However, past experience has proven that the *alba* form reacts much the same as does *Cattleya Dowiana* var. *aurea* in expressing increased colour where the product is the combination of one coloured parent crossed with it.

All of the types just presented would represent the major variations to be found in the

D. phalaenopsis section. Before leaving these it would be pertinent to discuss in brief the cultural requirements of these plants. Of prime consideration is the fact that they are seasonal. They have one period of growth, usually beginning in early fall and maturing in early winter. From late winter to early fall again these plants remain dormant as far as growth is concerned. This is the major key to the success of their culture. When in growth they want to be watered, fed and treated like any other orchid plant. However, when they are dormant, overwatering or overfeeding is disastrous. For this reason all cultural notes on this section say "grow them in small pots, keep them dry when dormant." If you live in a region that has dull winters and springs, you can see the difficulties you will experience in this respect, because they are dormant at that time. On the other hand not recognising their active period and giving them insufficient water and fertiliser during growth results in weak and poor growth with a following poor floral effort. A further problem in this group is bud drop. Usually this occurs when the grower is faced with high day temperatures with a quick drop in the night temperature accompanied by high humidity. To overcome this you should ventilate your house to keep the temperature down during the day, start your heat early to let the night temperature drop gradually and watch for excessive humidity created by heavy damping and lack of ventilation. In summation, to grow *D. phalaenopsis* watch the following points:

1. Pot in small containers to assure rapid drying.
2. Give ample light.
3. Keep on the dry side when dormant—late winter to early fall.
4. Give plenty of water and fertilise to assure large, strong growth when active, usually early fall to late winter.

Fortunately the hybridist has been able to overcome some of the problems that face the grower in handling species. Definitely this has been the case with dendrobiums. Hybrids of *D. phalaenopsis* are much easier for the amateur to handle. To date we have not obtained the perfection of flower form found in the species, but we have:

1. Extended the period of growth and flowering.
2. Greatly increased the number of flowers per spike.
3. Generally produced plants that are less susceptible to the pitfalls created in handling

the species.

To show you some of these hybrids, we will start off with the first Dendrobium hybrid produced in Hawaii. *D. Hawaii* (*D. phal.* x *D. tokai*).* Here we have a hybrid that, as far as the amateur is concerned, is as easy to handle as any plant can be. It is fairly intermediate in shape as far as the two parents are concerned. The other parent, *D. tokai*, is a native of the South Pacific Islands. *D. Hawaii* is a vigorous grower, flowers many times a year, and under favourable conditions produces two or more growths per year. Thus, the problem of long dormancy found in growing *D. phalaenopsis* has been eliminated.

Several years ago we selfed *D. Hawaii* and out of this selfing we developed several second generation seedlings that are now being used as parents. One of these is *D. Hawaii Bronze* var. This is a larger flower with interesting bronze colouring. This plant has proven itself a good parent. *D. Hawaii* var. *Green Gold* is one of two of the pure green or yellow segregants developed. We are expecting to flower shortly several crosses from this and we will then be able to apprise more accurately its potential as a parent. *D. Hawaii* var. *Miwa's Yellow* is a brighter yellow than *Green Gold* and again is being used extensively as a parent plant. One of our greatest hopes is that one or the other of these two parents may prove to be pure strained (homozygous) for their yellow colour. If they are, they will be the forerunners of strains of large flowered yellow and chartreuse coloured Dendrobium hybrids. *D. Hawaii Foster Garden's* var. is not one of the self-crossed seedlings but is a very fine type of the original cross. Shape here is much better than normal. Unfortunately, it is a difficult plant to set seed with. A few seedlings have been produced from it. Perhaps these will make better parents than it does.

We cannot leave the Hawaii variations without mentioning *D. Hawaii* var. *Luminosa aurea*. This is again a member of the self batch. Here we have the green colour and a red lip. It might be interesting to note that to produce these four varieties, *D. Hawaii Bronze* var., *D. Hawaii Green Gold*, *D. Hawaii Miwa's Yellow* and *D. Hawaii Luminosa aurea*, it was necessary to grow one hundred seedlings to maturity. The other ninety-six were all discarded as inferior types to the original strain. In this instance selfing proved an expensive task. Without it, however, we could never have gained the fine yellow forms. Truly there

is more to building a fine stud collection than meets the eye. Experience is proving that the crossing of one pretty plant with another is not enough. Orchids are a long term investment and the customer wants to be assured that he has a good chance of coming out on top when he buys unflowered seedlings. The breeder must recognize this challenge and wherever possible use parents of known breeding behaviour.

Another fine hybrid of great cultural ease and freedom of flowering is D. Pauline. This is, of course, nothing more than the natural hybrid *D. superbiens*. It is a cross of *D. undulatum* x *D. phalaenopsis*. There has been quite a bit of confusion in the early nomenclature of dendrobiums and this is a typical example. Another is D. Liliha. This is the result of back crossing D. Pauline to *D. phalaenopsis*. It is sometimes called in England, *D. Yule*. Also if one were to use the natural hybrid *D. superbiens* and back cross this to *D. phalaenopsis*, the result is known by name as D. Louis Bleriot. Thus, D. Liliha, D. Yule and D. Louis Bleriot are one and the same thing except that they represent different strains bred in different countries and their parents were either natural hybrids or artificially produced under different names.

It has long been a matter of personal interest to see the variations in the strains of D. Louis Bleriot, Yule and Liliha. To date, the best exhibition types have been produced in Europe. Growers have been reticent to reveal parentages used. We have imported plant after plant of fine forms of *D. phalaenopsis* from Europe, but the result of seedlings bred from these differ little with that of crosses bred from our own strains. The European types of D. Louis Bleriot are for the most part triploids and are highly sterile in breeding. Because they are triploids it suggests that one of the original parents must have been a tetraploid. Recently, we learned that European breeders have used a superbly fine type of *D. superbiens*, known as var. *superba*. We have at last obtained a plant of this and perhaps by working this into some of our better growing strains we will be able to produce the same exhibition quality, but with a much more vigorous and easy to grow hybrid. However, all of these hybrids are easier to grow than *D. phalaenopsis*. Another fine subject in lavender dendrobies of the phalaenopsis type is D. Sander's Crimson (*Taurinum* x *phalaenopsis*). This also has a frequently used synonym in D. Bali. Colour varies in this hybrid from very dark forms to medium laven-

ders. The *D. Taurinum* parent has increased the size of the lip and imparted great vigour and freedom of flowering. By using some of the alba forms of *D. phalaenopsis* that appear to have a colour gene intensity it should be possible to produce some extremely dark forms. This hybrid is definitely a good amateur subject.

D. Louisae (*veratrifolium* x *phalaenopsis*) represents the tremendous freedom of flowering, the great spike length, and the general vigour of hybrids produced with the species *D. veratrifolium*. This species is without doubt one of the best in existence to produce almost perpetual flowering types. The plants grow like weeds and while in the early primary crosses the individual flowers do not have the wide petals and round shape of the phalaenopsis type, they are still beautiful. Let no one say that these small flowered dendrobiums have no value as cut flowers. Arranged in vases for cut flowers, they are superb. They can also be made up into some of the most charming corsages. Any floral artist should be more than willing to jump to the challenge. They offer far more than a big cattleya in charm, and can be chosen to fit the personality of "my lady fair".

The continued use of the aforementioned hybrids, D. Hawaii, Pauline, Liliha, Louisae, intercrossed, backcrossed, selfed and line bred for types nearing the larger flowered types of *D. phalaenopsis* will result in the not too distant future in types of dendrobium hybrids that should approach the species but that will have lack of season, no dormancy and an ease of growth that will eventually put the species out of the running. This we would say is prediction No. 1 on things to come.

So much for the hybrids built around *D. phalaenopsis*.

Let us rather now take up one at a time those species that have helped to make Hawaii famous for its Dendrobium hybrids. It would be these plants crossed back and forth and with other hybrids that have produced what are today known as the Hawaiian novelties. We in one sense object to the use of the word "novelties" although we realise that it has been meant as a compliment. In recent correspondence with the Secretary of the German Orchid Society, he made the statement that German growers find it hard to believe that such a wide range of fascinating types and colours could ever have been produced in this genus. It was, of course, these same German growers who in the early days of pre-World War I grew *D. phalaenopsis*

to the height of its cultural perfection. The word "novelty" is all right if it does not infer that these hybrids have no useful purpose other than being different. They are, of course, capable of a lasting permanence that would hardly besit the use of the term "novelty" that is frequently applied to other plants of short favour.

Among the most important of the species used in such breeding is *D. stratiotes*. This species occurs naturally in the western part of the New Guinea section of the Pacific. It was first introduced to horticulture in 1885. The literal translation of the name means "soldier" and refers to the erect habit of the bulb growth. It is also one of a widely known section called the antelope orchids because of its petals, which give the appearance of antelope horns.

In spite of the fact that this species was introduced in 1885 to commerce it was not until approximately 1940, fifty-five years later that the first hybrid from it was recorded. All of these early hybrids, produced about 1940, were made in the Dutch East Indies. Most of these plants were destroyed and lost to cultivation during World War II.

It was not until Dr. Walter Carter brought a plant of *D. stratiotes* back to Hawaii in the late 1930's from the Dutch East Indies and then distributed parts or divisions of this plant to other Island growers in the early 1940's that it began to be used as a parent in Hawaii. Since that time it has figured prominently in the hybridising of the Hawaiian breeders. It characterizes its hybrids with a complete dominance of shape, a somewhat shortening of stem length, production of upright stems, extreme texture of the flowers and a lasting quality that is unsurpassed. The species itself and many of its hybrids will last in perfection on the plant for three months or longer.

One of the best known of the *D. stratiotes* hybrids is *D. Salak*. This is the cross of *D. stratiotes* and *D. undulatum*. Most of the hybrids take on the golden brown colour of the *undulatum* parent and the shape of the *D. stratiotes*. This hybrid makes up into beautiful corsages.

D. Pauoa (Sander's Crimson x *stratiotes*) is another hybrid. Many of these have great size. Colours vary, but all are various shades and markings of lavender. Texture is excellent and the flowers last for a long time.

D. Caesar (*stratiotes* x *phalaenopsis*) shows considerable variation in colour depending on the strain of *D. phalaenopsis* used. The flowers are large and they last in perfection for weeks.

This hybrid is excellent for cut flower purposes. *D. Caesar* occurs with a white background with a lavender flush. The hybrid can be pure white. This is the most sought after type by amateur collectors in the Hawaiian Islands and as a result the price for proven plants of this type is quite expensive. To date we have not been able to produce pure white true to seed in quantity. You may be assured our breeders are working on this problem to reduce the cost of this type.

D. stratokai, a hybrid between *D. stratiotes* and *D. Tokai*, is one of the most beautiful in this section. It has the shape of *D. stratiotes* but much of the deep chartreuse colour of *D. tokai*. Again, it is characterized by fine texture, long lasting quality and freedom of growth.

D. Mildred Kazumura is the result of crossing *D. Hawaii* and *D. stratiotes*. There are some very fine subjects in this hybrid and a great range of colours. Yellows, bronze, lavenders, peach tones, salmon shades have all appeared. This is due to the heterogygous (mixed) genes of the Hawaii parent. We showed you earlier in this programme some of the variations that appeared when *D. Hawaii* was selfed.

D. Sunda Island was produced by crossing *D. stratiotes* with *D. veratrifolium*. This hybrid is principally white with a pale blue cast. It contains all the fine characters of the other *D. stratiotes* hybrids.

By crossing *D. stratiotes* with *D. Gouldii* we produce the hybrid *D. Lum Goo*. Here the principal colours are deep golden yellow and brown.

D. veratrifolium has been used with *D. phalaenopsis* to produce *D. Louisa*. This species has been used with other dendrobiums and really constitutes a group of its own. It is native to New Guinea and extends on westward into the Dutch East Indies. It is a highly prized garden plant in that part of the tropical world and often grows pseudo-bulbs ten to twelve feet high with hundreds of spikes of flowers. While no one in Hawaii has ever matched such culture as this, it is still a tremendously vigorous species. Crossed with other dendrobiums, it never fails to impart tremendous vigour to the hybrid. Its greatest drawback is the reduction of size of the individual flowers. However, when one considers the great beauty of the long arching spikes, the delicate shades and colours of the flowers, plus the fact that the hybrids are almost indestructible with regard to culture, you have a section that war-

rants the close inspection of the amateur grower. As plants for display purposes, this section is unrivalled. In time we will undoubtedly produce hybrids of this type with all sizes, shapes and colours of flowers.

D. Lester McCoy is one of the best of this group. It is a cross between D. Hawaii and *D. veratrifolium*. Here again as in D. Mildred Kazumura, the range of colours is tremendous—yellows, bronze, lavenders, greens, peach, apricot, white, the whole gamut. We did cross D. Hawaii Green Gold with *D. veratrifolium* and this selfed yellow D. Hawaii has produced as a parent almost 100 per cent yellow forms of D. Lester McCoy. So you see, a breeder's work is never done, and the fields to be yet explored are much greater than anything even thought of to date. Some day we will know our parents well enough to be able to make a cross and predict the result without any error.

D. Joanne Sayers is a good companion plant to D. Lester McCoy. Actually, the parentage is quite similar. It is the cross of *D. tokai* x *D. veratrifolium*. *D. tokai* is the father of D. Hawaii, which in turn is the papa of Lester McCoy. So the only difference in the two is the insertion of one generation of *D. phalaenopsis* blood in Lester McCoy. D. Joanne Sayers has no great range of colours, but limits itself to white, cream, green or yellow. Therefore, it would seem that the insertion of one generation of *D. phalaenopsis* blood was responsible for the off-colours produced in D. Lester McCoy, but absent in D. Joanne Sayers.

One of the most free and best flowering hybrids in this section is D. Ursula. This has as parents, *D. veratrifolium* and *D. undulatum*. Colours are mostly shades of brown and yellow, but the under tones of blue give them a very unusual colour cast. D. Ursula crossed with other potential blue parents such as D. Gouldii, *veratrifolium*, 442nd Infantry will no doubt in time increase the number of blue Dendrobium hybrids. A good example of the "blues" is D. Blue Boy. The parentage here is *D. veratrifolium* x Louis Bleriot. Another good blue is *D. superbiens* x *veratrifolium*. Both of these "blues" contain parents that have *D. veratrifolium* on one side and a hybrid containing yellow on the other. D. Louis Bleriot has *D. superbiens* in its background and *D. superbiens* has *D. undulatum* behind it. So when you use a lavender-yellow combined hybrid and cross this with *D. veratrifolium*, the emergence of some blue types is almost a certainty. Usually they do not make up the bulk of the colours

in a cross, but represent the minor segregation. Intercrossing and line breeding of these blue segregants should in time produce strains of "blues" that will breed true to seed.

The next large section to be considered in the Dendrobium hybrids are the hybrids developed from *D. Taurinum*. This species was first discovered by Mr. Cuming in the Philippine Islands and was sent to the nursery of Messrs. Loddiges in England, where it flowered in October of 1842, one hundred and sixteen years ago. Imported jungle plants of this species were then, and still are, hard to establish and get to grow. Plants raised from seed, or hybrids raised from it, are on the other hand among the most vigorous and easy subjects to cultivate. The name *Taurinum* comes from the imagined likeness on the part of the taxonomist to the lip resembling the face of a bull, and the petals, the horns. Thus, it is commonly called the "bull's horn orchid". The first hybrid to make its appearance from this fine species did not occur until the middle 1930's was D. Sander's Crimson, the cross of *D. Taurinum* x *D. phalaenopsis Schroderianum*, registered in 1935. At about the same time hybridists in the Dutch East Indies all produced such hybrids as D. Bali, Batavia and Bangkok, which are all nothing more than crosses of *D. Taurinum* with other varietal forms of *D. phalaenopsis*.

The first Hawaiian hybrid of *D. Taurinum* was D. Taurus, produced in 1941 by the early commercial pioneer hybridiser of Hawaiian dendrobies, Miss Ellen Williams. This is the cross of *D. Taurinum* x *D. undulatum*. Since this first beginning in 1941, *D. Taurinum* has been used prominently in Hawaiian work.

D. Helen Bromley, a hybrid between D. Taurus x *D. tokai* is typical of this group. Great vigour of plant growth and exceptional flower production, mark this extremely beautiful subject. It is also proving itself a good parent.

D. Shibata is a good companion subject to D. Helen Bromley. It is the cross of the species *D. Taurinum* x *D. tokai*. It has a much more prominent "bull's horn" shape than does D. Helen Bromley. D. Shibata is being used as a parent to a considerable extent in modern breeding.

D. 442nd Infantry, the hybrid of *D. Taurinum* x *D. veratrifolium* is another fine example of this type of hybrid. Again, great plant vigour with tremendous production. This hyb-

rid, too, is giving considerable promise as a parent.

D. 100th Battalion is another of the fine "bull's horn" types. This is the result of crossing *D. Taurus* x *veratrifolium*. Here we have a tremendous variation in colours from buff to yellow, salmon to apricot, and all the interesting warm shades.

Again, in this section the number of recorded hybrids is too overwhelming to mention them all. More recent hybridising efforts are aimed at keeping vigour, but reducing plant size. This highly interesting flower type, contained in a moderate size, will make a fine subject for amateur growers. We have many such crosses available today.

The next of the large sections to consider is *D. undulatum*. This species is a native of North Queensland. Like the other mentioned, it did not find its way into hybridising until the mid 1930's and early 1940's. Now some ten to fifteen years later it represents one of the key plants in this work. It imparts great vigour to its offspring. It has heavy production of long sprays of flowers, a quaint curly waving of the sepals and petals on the individual flowers. It also figures prominently in colour intensity where lavender flowers are concerned. Used in back parentages with the species *D. veratrifolium*, it produces blues. It extends the season of flowering considerably in its hybrids. It is an extremely heterogygous species and when selfed it produces every imaginable type, brown to pure light yellow. All of these important breeding facts have been brought to light in just a few short years.

Among the best examples of its hybrids are such things as *D. Hula Girl*. A cross of *D. Hawaii* x *D. undulatum*, this hybrid has truly produced some beautiful things. Wide colour range with undulating, swirling appearance of the flowers suggesting its name, *D. Hula Girl*.

D. Owen, a cross of *D. Bali* x *D. undulatum*, is another good example of a fine *undulatum* type hybrid. In this cross many outstanding deep-red colours have appeared. These almost look as if they were mixed up with sophronitis blood.

The influence of this species on other groups in such hybrids as *D. Louis Bleriot*, *D. Salak*, *D. Ursula*, *D. Helen Bromley* and *D. Taurus*. Truly, *D. undulatum* can be recorded as one of the most prominent forefathers of modern *Dendrobium* hybrids.

The last group of *Dendrobium* species to consider in the development of Hawaiian hybrids

is *D. Gouldii*. A very rare plant was this until World War II sent soldiers from the United States to many inaccessible islands in the South Pacific. Hawaii, a training and staging centre for these troops, interested them in orchids. Thus, many a soldier or marine who had been extended the hospitality and warmth of a Hawaiian home during his training period went forward to battle with the hope that he could send back to his host a plant or two of some new orchid. Such was the case of *D. Gouldii*. This species found by Schlechter in his early botanising of the South Pacific remained a long lost treasure. When our troops invaded Guadalcanal, this species was found in considerable numbers. It was returned to Hawaii and called *D. Guadalcanal* for several years. Other importations of it found their way back as a bulb or two in the duffle bag, or back pocket of pilots, sailors or travelling merchants. Thus, an important addition to our breeding stock came to Hawaii both as the result of hospitality and adversity. That men had the desire to look for beauty and add to horticulture during a time when they were faced with the loss of their life in a steaming hot jungle island is a tribute to mankind's finer heritage.

D. Guadalcanal, the first hybrid registered from *D. Gouldii*, was so named in honour of its importation and the fact is that the species carried this name for a long time. It is the result of crossing *D. Hawaii* and *D. Gouldii*. It contains a great many interesting forms and colours.

D. Jacqueline Thomas shows the result of crossing the species *D. Gouldii* with *D. phalaenopsis*. Actually, we hoped here to maintain the yellow colour of *D. Gouldii* but increase its size. Thus, the *D. phalaenopsis* var. *Mauna Kea* was used. However, the interesting result of colour intensity crops up again and we have a range of lavender flowers, some of which are very dark.

D. Gouldii must carry recessive genes for lavender. So apparently does *D. phalaenopsis Mauna Kea*. Thus, the mating of the two produces full lavender colour.

D. T. Shioi shows what happens when *D. Gouldii* is crossed with *D. Taurinum*. This hybrid has produced some of the darkest forms yet.

It can be summarised that *D. Gouldii* imparts vigour to its offsprings—very heavy production, and bears watching as a colour intensifier. More and more of the *D. Gouldii* hybrids are making their debut each year. We feel it

has great promise as a contributing parental influence on modern hybrids.

The number of *Dendrobium* hybrids produced in Hawaii is much too large to attempt to describe them all. We have tried to tell you of representative types, not the very finest, nor yet the poorest. We definitely wanted to strike an average and to show you what you can expect from the various species.

Culturally these hybrids are exceedingly easy to handle. They flower more than once a year. The old bug-a-boo that dendrobiums are tricky, hard plants to handle does not hold true with them. Their flowers can be used for all sorts of purposes. They offer a challenge to your floral artistry. Truly, we will accept the word "novelty" if by that you see they are different. We feel that the amateur orchid grower is entitled to breeding work that has as its main

purpose the production of plants that are different, easy to handle, easy to flower, have long lasting flowers and can be used effectively for display purposes either in the home or the greenhouse. To this end, we feel our dendrobiums will stand the test.

* *D. tokai* used by Miss Ellen Williams in making the first *D. Hawaii* is actually a unique, and is in the Tenney collection, from which it has never been dispersed. Miss Williams had the flower determined as to species by Louis Williams. *D. tokai* from Fiji and later from Samoa have both been used to remake Hawaii, but neither are very close to *D. tokai* (Tenney) as originally determined, although all three forms may be closely related. Fortunately, colour and shape combinations achieved by crossing with *D. phalaenopsis* are similar.

—732 Kapahulu Ave., Honolulu, Hawaii.

Special Winter Show Feature

GRAND CHAMPION CYPRIPEDIUM OF N.S.W.

• *N.S.W. ORCHID SOCIETY LTD.*:—At the request of delegates from affiliated Societies and Clubs, the N.S.W. Society Ltd. has decided that a special medal be granted to these Societies for competition at their Annual Shows. The silver medal for Societies exhibiting in the N.S.W. Festival, and the bronze medal for the Societies unable to exhibit, can be awarded by individual Societies to winners of any class in their schedules they so desire.

With the President, Sir John Hall Best, and a strong committee, reviving the Winter Show intense interest is being displayed in the Grand Champion Cypridium of N.S.W. which also gains the *Australian Orchid Review* Trophy donated by Shepherd & Newman Pty. Ltd. Entries have been solicited from all States in the Commonwealth. Interstate growers may air freight the cypridium flowers (not the plants) to Mr. Frank Slattery, 12 Eddystone Road, Bexley, before Monday, 30th June.

Interstate flowers deemed worthy of an award will be judged by the N.S.W. panel of judges.

The Winter Show to be held at the Y.W.C.A. Hall, 185 Liverpool Street, Sydney, on Monday, 30th June, has a very interesting schedule as follows:

GRAND CHAMPION CYPRIPEDIUM OF N.S.W.

Class 1. Champion CYPRIPEDIUM. To be judged on form and colour.

- (a) Green or Yellow
- (b) Red or Pink
- (c) Specimen
- (d) Maudiae Type
- (e) Any other colour not specified

Class 2. Best Group of CYPRIPEDIUMS. Minimum number 6.

Class 3. Display of ORCHIDS and FOLIAGE PLANTS. To be judged for quality, display and variety of Orchids and effective use of decorative plants. Minimum area 4ft. x 4ft. Any Orchids in this class are eligible for prizes in other classes.

Class 4. One CYMBIDIUM. To be judged on form and colour.

Class 5. Best decorative CYMBIDIUM.

Class 6. Best Export CYMBIDIUM.

Class 7. Best CATTLEYA.

Class 8. Best DENDROBIUM.

Class 9. Best VANDA.

Class 10. Best PHALAENOPSIS.

Class 11. Best ORCHID not elsewhere included.

Class 12. Best SHOULDER SPRAY. Any Orchids.

When and How to Divide

By FRED. A. STEWART, INC.

(Left). Plant has just flowered and pot is filled with plant.

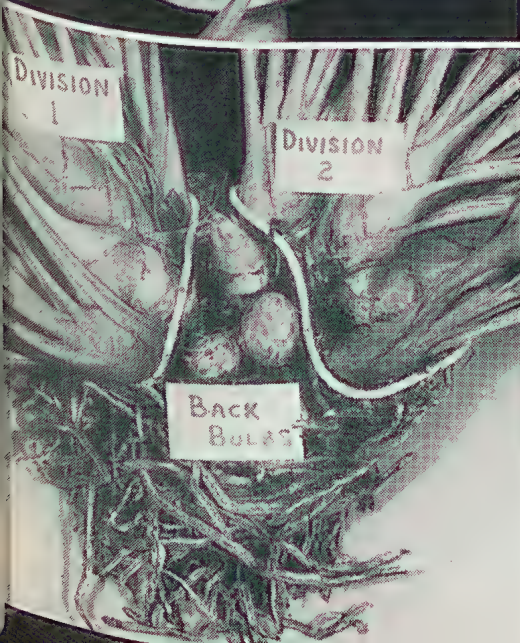
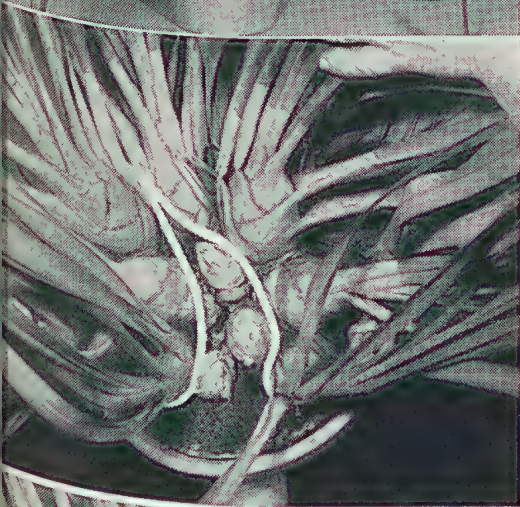
(Centre) Looking down on plant showing where division will be made.

(Bottom left). Showing how plant is pulled apart. Note four and five bulb divisions. Back bulbs will be potted separately.

★

CYMBIDIUM SEEDLING BEATRICE
'SUPERBA' x ALEXANDERI 'WESTONBIRT'
F.C.C., R.H.S.

13 spikes and 42 leaves and still growing.
See text, page 79.





(1) *Bulbs are joined together at their base. Pull them apart until you can see the break and use knife to make a clean cut. Treat all open cuts with Tree Seal.*

(2) *Starting media for bulbs may be Fir Bark, Pea Gravel, Peat Moss, or Sponge-Rok. Set bulb to $\frac{1}{3}$ of its depth in flat or pot in starting media.*

WHAT ARE BACK BULBS? How do I propagate them? Back bulbs are rootless, leafless bulbs on the rear sections of the plant, which should be removed at the time of potting or dividing and re-propagated.

(3) *New growth will show from the dormant eyes and as its roots appear remove the bulb from starting media.*

(4) *Pot into standard Cymbidium mix in a pot large enough for development of several bulbs. Back bulbs produce flowering plants in from one to three years' time under normal care.*



General Culture of Cymbidiums

FRED. A. STEWART, INC.

• Cymbidiums are among the easiest of all orchids to grow. They can be and are successfully cultivated and flowered in all the temperate parts of the United States and the world. Each year Cymbidiums are becoming increasingly popular. This is a heartening trend for they are, from many standpoints, one of the most satisfactory of all orchids to grow. Their vigour, ease of growth, pleasant appearance when not in bloom, long lasting flower quality and range of delightful colours, are all reasons for their increasing popularity.

In recent years great strides have been made in breeding Cymbidiums in America and in England and new Cymbidium hybrids which we have originated are unsurpassed for their general high quality. Many of our new hybrids are internationally noted for their richness of colour, fine shape, floriferousness and great vigour. Now that fine Cymbidiums are more readily available, plants which a few years ago were high priced prize winners can now be matched by quite a number of comparable varieties in the new hybrids and at very moderate prices. As the popularity and quantity of Cymbidiums increases, so do the standards for what constitutes a fine variety. In Cymbidium growing areas during the months of February through May when most of these plants are in bloom, interest runs at a high pitch. Large numbers of show plants are exhibited at the flower shows and orchid society meetings. The merits and demerits of the various fine plants exhibited are discussed by thousands of intensely interested persons. Aside from this keen interest there are increasing thousands who recognise and enjoy Cymbidiums as lovely shade garden plants that can be grown in the garden and will stay in bloom for months. Commercial Cymbidium growing for cut flowers is already a multi-million dollar business.

The How, Where, When and What of Cymbidium Culture

The following article is filled with helpful instructions and photographs of all phases of Cymbidium culture. Some of the instructions such as disease control are the latest, most advanced developments; other instructions are time tested and proven. We are confident that both novice and advanced grower will find them of interest and value.

Cool Growing Soil Plants

Whatever type of orchid we wish to grow, we must first determine the basic requirements for their successful culture. With Cymbidiums we must fix in our mind that they are cool growing terrestrials (plants that grow in soil), and that they put out a great deal of growth each year compared to other types of orchids.

Give Air and Light

Cymbidiums are ever-green and do not require a rest period. Root action is constant even during the winter months, though growth does slow down at this time. They do best when there is a free circulation of air, and if grown under glass care should be taken to keep the air cool and fresh. A small fan to circulate the air is helpful. Their growth is soft and poor if the plants are subjected to stagnant atmospheric conditions or if they do not receive enough light.

Camellia Garden Conditions Ideal

In California and similar areas, where they can be grown out of doors, they may be grown in a lathhouse where conditions are favourable for Camellias, Azaleas and other shade loving plants. They are often grown successfully in the ground under trees where the shading is not too dense and the tree roots do not rob them of nourishment and moisture. If grown in pots or tubs under trees this is not a problem.

Will Stand Down to Freezing

In areas where winter freezing occurs, a glasshouse is required to protect Cymbidiums from below freezing temperatures. When grown under glass, a minimum night temperature of around fifty degrees is considered optimum though minimum temperatures to forty are permissible. Attempts are sometimes made to flower Cymbidiums along with Cattleyas, but the minimum night temperatures required for Cattleyas (60 degrees-62 degrees F.) are too high for the successful flowering of Cymbidiums. Under these conditions the plants grow well but do not flower. If spikes develop, the buds often turn yellow and drop off before maturity. When grown out of doors, Cymbidiums will tolerate temperatures around, or even slightly below, freezing. If the temperature should drop to freezing, a bed sheet, a sack or a sheet of plastic should be thrown over

the plants for their protection. Now that large sheets of flexible plastics are available and cost so little, many people build light structures of this material to give their Cymbidiums winter protection.

Native to Cool Mountains

The species from which our fine Cymbidium hybrids come are natives of the mountainous areas of South-east Asia, growing at elevations of from two to seven thousand feet. At these high elevations near the equator, the days are moderate in temperature with nights approaching thirty-two degrees at times. As could be expected, the sunlight is quite intense. Cymbidiums do best in parts of the world where these same conditions of bright days and cool nights are found.

A Good Cymbidium Soil, its Ingredients and Properties

Cymbidiums, unlike most other orchids, can be grown in soils suitable to other shade loving plants. An important fact to bear in mind in formulating a Cymbidium soil is that the drainage must be very good. Though Cymbidiums require great amounts of water during the growing season, they will not tolerate any water stagnating around their roots. The preparation of a compost for Cymbidiums is a highly controversial subject, most every Cymbidium grower having his own formula for compounding his mix, though in recent years there has been a strong swing to popular acceptance of certain basic properties and ingredients. Most composts today generally contain many or all of the following ingredients in varying proportions:

1. Leaf Mould for physical properties, food value and beneficial soil action.
2. Clay free Silt Sand for body.
3. Peat for physical properties, acid reaction, food value and moisture retention.
4. Palco Wool (ground redwood bark) for buffering action, acid pH and general physical properties.
5. Fir bark for physical properties, acid reaction, food and moisture retention.
6. Lime and fertilisers.

Used Osmunda can be added to about 25 per cent above if available as a by-product from Cattleya repotting. We have found the shredded bark of the California Redwood tree to have a very beneficial effect in maintaining the correct acid pH as well as having desirable general conditioning properties. This can be purchased from some lumber yards, where it is sold as an insulating material under the

trade name of "Palco Wool". It is also available at our nursery. We suggest the addition of about twenty-five per cent of this Redwood bark to the prepared soil. Redwood shavings also have very desirable qualities. Some growers add about three per cent of steer manure to their mixture. In conclusion, the basic facts to bear in mind when you mix your soil are, make sure it is open and porous, has an acid reaction around pH6, and that the drainage is thorough.

Recommended Cymbidium Potting Mix

Use any unit of measure such as a flower pot or a shovel.

- 2 parts Fir Bark.
- 2 parts Coarse Oak Leaves. (Leaves off other deciduous trees can also be used.)
- 1 part Fine Clay Free Sand.
- 2 parts German or Canadian Peat.
- 3 parts Redwood Fibre (Palco Wool).

—
10 parts

To 2 cubic feet of above compost can be added the following:

- 1 Handful Hoof and Horn Meal.
- 12 oz. Dolomite Lime.
- 1 to 2 oz. Single Super Phosphate.

Mix basic ingredients well, then add minor ingredients so that they are well incorporated. Moisten mix so there is no dust. Mix can then be used. Be sure roots are spread out and mix is firmed down and worked well around roots. We suggest watering after repotting to settle soil properly.

Watering Important—Cymbidiums like lots of Water

Assuming that we do have a carefully formulated mix with sufficient food value and good drainage, we must now balance this off with generous watering in order to assure the plant's optimum growth. During the active growing season, which runs roughly from March through September in most parts of the United States, the Cymbidium plant should be watered sufficiently to keep the compost quite on the moist side, in fact, quite wet compared to Cattleya culture. It is important when watering to see that the plant is thoroughly watered. Run the end of the hose around the inside rim of the pot to see that the compost is thoroughly soaked. Soils with an organic content have a tendency not to take water evenly when too dry, hence thorough soaking is necessary. During the winter months when growth is at a minimum, the plants can be run considerably less moist. Sufficient water to avoid shrivelling of the bulbs is a good general rule

during the dormant winter months. On sunny days, during the summer months, the plants will benefit from spraying of the foliage. This keeps temperatures down through evaporation, increases humidity and has a general beneficial effect on the plants. Dampening of the walks and benches once a day when possible is advisable. Automatically controlled humidifying sprayers under the benches provide optimum moisture.

Repotting—How, When, Why

A mature Cymbidium plant growing in a pot or tub is generally repotted or divided every two or three years. Repotting is necessary when the plant has filled the container with its growth or when the compost has broken down. The best time for repotting a mature plant is *as early as possible in the spring after the plant has flowered*. If a plant that is being repotted has a compact growth habit and does not have any, or more than a few, leafless bulbs, it is often advisable to wash off the old soil from the roots and shift the plant without dividing to a larger pot with fresh soil. With larger plants which may have a number of rootless, leafless bulbs in the centre (called back bulbs), it is generally desirable to remove these rear bulbs at the time of repotting and dividing. When dividing observe how the plant is growing and try to make well balanced plants of each division. From three to seven mature leaved bulbs can be considered a flowering size plant.

If the plant is a desirable variety back bulbs can be saved and rooted to form new plants. Do not be too eager to divide into too small plants for it takes a good size well established plant to produce the best flowers. It is advisable to sterilize all cuts on plants when dividing with a good bacterifungicide. We sterilize with a saturated solution of potassium permanganate (dissolve crystals in jar water until some at the bottom won't dissolve) and seal the cuts with Tree Seal. It is common practice to enlarge the drainage hole in the bottom of the pot to ensure good drainage. When potting, cover the drainage hole with four or five pieces of broken crocks. Do not "overpot", unless the plant is a sturdy grower. Too large a pot often keeps the soil too wet at certain times of year, resulting in rotten roots and a sickly plant. Repotting usually is somewhat of a shock to the plant, particularly when the plant is divided and the roots disturbed. Certain varieties appear to be especially susceptible to shock. After repotting, water to settle soil, place the plant

temporarily in a well shaded, moist location and supply moisture by spraying foliage and outside of pot. This dry period will allow cuts or fractures to heal over. After about ten days water as usual.

Light Important to Growth and Flowers

This is one of the most important factors in the successful flowering of Cymbidiums. There seems to be controversy as to optimum light intensities, however, a good general rule is to give the plants sufficient light so that the foliage is greenish yellow rather than a verdant green. Cattleya growers will find the optimum light intensity is about the same for both genera. Do not carry this to extremes, however, so as to burn the foliage and have too many brown leaf tips. Excessive sunlight is one of the causes of brown leaf tips, as is *excessive dryness at the roots*. If the plants are grown under trees make sure that the shade is medium to light such as afforded by Californian Live Oaks. Trees such as Avocados or other dense shade types afford entirely too much shade. Several hours of clear early morning and/or late afternoon sun are highly desirable. We wish to emphasise that too dense shading is not conducive to optimum flowering. We have frequently observed that Cymbidiums grown under trees in southern California flower for a period, then cease to put out spikes though the plants show satisfactory growth. Inspection discloses, in many cases, that the trees have either extended their branches or increased the density of their foliage, thereby increasing the shading to a point too dense for consistent flower production. This takes place so gradually as not to be noticed and other reasons are often sought for the lack of flowers. Continually we are learning that several types of commercial orchids, including Cymbidiums, produce more and firmer flowers when subjected to greater light intensity than has generally been accepted as optimum. Around 2,000 to 3,000 foot candles is desirable if all conditions are right. When plants are *in flower*, however, heavier shading is required and above instructions do not apply.

Keeping House Cool—Hot, Dry Areas

In the hot arid parts of the country the evaporative cooler or so-called desert coolers are a great aid in maintaining humidity and keeping down excessively high day temperatures if plants are grown in a greenhouse. They work on the principle that if hot dry air is passed through water (wet pads) it loses its temperature and picks up moisture. This is why coolers of this type work so well in the arid South-west.

The cooler is installed outside the house and air blown in through a duct under the benches. Often temperatures as much as 10 degrees-20 degrees below maximum outside can be maintained if weather is hot and outside humidity low.

Few Pests—Watch Red Spider

Fortunately, Cymbidiums are subject to fewer pests and diseases than are most garden plants. Of course, care must always be taken to see that slugs and snails are kept under control. They are especially damaging to the tender asparagus-like flower spikes. Orchid scale can be cleaned off with a toothbrush and plants sprayed with Malathion or D.D.T. solution. Spraying with either of above solutions once a month until all scale has been eradicated is advisable. Red Spider is perhaps the most persistent and difficult to detect of the pests. It can be found under the leaves where it sucks the surface sap and makes the undersides appear scratchy-whitish where the surface cells have lost their sap. It can be controlled by syringing the undersides with a strong stream of water or by spraying with the organic Phosphate sprays such as Malathion. Care must be taken in using these sprays, as with most any of the modern insecticides. There are few rot and virus diseases found on Cymbidiums. The spread of these diseases can be controlled by proper precautionary measures such as segregating, sterilising cutting tools and keeping the plants in good health. (See section on Diseases.) It is important that a regular spraying schedule be established. Present day advances in agricultural chemistry make it possible to keep the plants free of pests if preventive measures are regularly applied.

Diseases

Fortunately Cymbidiums have far fewer diseases and pests than most other plants. Good cultural practices such as keeping the plant growing well in good soil, aseptic technique during repotting, plenty of light and circulation of air, all minimise risk of disease. Occasionally disease is encountered, however, and with this thought we have put down the following information.

There is a bacterial rot disease occasionally encountered known as ERWINIA CAROTOVORA. The first signs are generally a rotted growth. The plant must immediately be removed from the soil and all infected parts cut off. *Soak the plant in solution "B" for a half hour, then let dry off. Pot up and watch carefully.*

Bulb and Root Rot

Difficulty is sometimes encountered in a rotting in the basal areas of new growths. If not controlled this rot may spread into the mature bulbs and roots and eventually destroy the entire plant. The inception of this rot frequently is caused by water standing overlong in the basal area of the new growths. Late watering on dark days sometimes does this damage. The difficulty may also be introduced by two common soil fungi, Rhizoctonia and a fungus of the water mould type.

These two fungi carry over readily in soil and plant parts and cause infection on a wide range of plants. They are readily spread with water, soil or infected plant parts, but form no stage which is air-borne. Once soil has been infested with either of these fungi it remains infested indefinitely and plants planted into it become infected.

Suggested Control Procedures

The ultimate control of these pathogens and all others attacking orchids is their elimination from your operation. The two general basic means of achieving this are sterilised soil and disease-free planting material. Orchid growers have an advantage in achieving this goal since their plants emerge from the flasks completely disease free, and the plants are grown in pots or tubs by many growers. A disease free programme is then directed towards maintaining this condition and preventing contamination. This stresses the necessity of a rigid programme of sanitation.

Once a plant is infected, there are no control measures which are 100 per cent effective, but several chemicals are being investigated which look promising in both reducing the severity of the infection and minimising its spread.

Soil coming in contact with these infected plants will also contain the pathogenic fungi and will infect new plants in that area if plants are grown in beds unless adequate control measures are taken. If plants are grown in pots they should be repotted in clean soil after plant has been treated. The infested soil should either be completely removed or treated chemically with a thorough soil drench. The chemicals which we are currently recommending for the two fungi involved here are Dithane and Terraclor. Dithane is applied at rates of 1 part Dithane to 500 parts water and Terraclor is used at rates of 2 lbs. per 100 gallons of water. The two chemicals can readily be mixed together and applied at one application. Thus, 6½

gallons of mixture can be obtained by adding $\frac{1}{4}$ cup of Dithane and $\frac{1}{8}$ pound of Terraclor. This drench can also be used around plants where the infection has not become too severe to reduce the damage and limit the spread.

Should any transplanting be contemplated, care should be taken not to introduce disease organisms into clean soil. Pathogens carried with the planting stock do more damage in sterile soil than in untreated old soil due to the difference in competition from other organisms. To prevent transferring disease organisms in transplanting, plants can be soaked for $\frac{1}{2}$ hour in five gallons of water containing the following:

"B" (Formula); 3 tablespoons agrimycin;
 $\frac{1}{4}$ cup Terraclor; $\frac{1}{2}$ cup Fermate.

The Agrimycin is for specific bacteria control, the Terraclor is specific for Rhizoctonia, and the Fermate is a general fungicide. *Be sure all plants have excess solution drained from new growths.*

The above procedure is not suggested except in cases where these diseases occur or are suspected.

We have noted that the infection of back bulbs progresses rather slowly. Because of this, valuable bulbs can often be saved by cutting out the rotted area and soaking in the above chemicals.

Feeding—How, What and When

Whether or not to apply fertiliser is another much discussed subject. We believe that a compost such as has been recommended contains sufficient plant food to last for some months. However, if it is decided to use a fertiliser, it should have an acid reaction. If a commercial fertiliser is used, it should be applied at about one-third the strength recommended for other plants. Orchids will not tolerate a strong fertiliser programme. Some growers use a weak solution of liquid manure. An application of one tablespoon to one gallon of water about every two weeks to a month during the growing season is sufficient. Instant Vigoro, Hyponex, Gaviota and Wilson's are brands frequently used in Southern California.

The culture of seedlings differs from that of mature plants in that the objective desired is vegetative growth. Cymbidium seedlings prefer the same conditions as Cattleya or even Phalaenopsis up to the time they reach flowering size. When they reach flowering size (3-5 bulbs) they must have more light and cool nights. Never let them run dry at the roots. They prefer quite heavy shading and must be

watched very carefully for Red Spider. Thousands of people are successfully raising Cymbidium seedlings today and, if their needs are met, their successful culture is not difficult. When seedlings are obtained from sources having the best stud stock and the crosses are carefully bred using experience and scientific know-how, the growing of seedlings is most rewarding as well as financially profitable. It is from such seedlings that the better varieties and new parent stock are obtained. There is the element of speculation, of course, since all seedlings, even when well bred, will not be desirable, but the percentage of good ones from good parentage is amply rewarding.

An attempt has not been made to cover the field completely, but to give a few of the basic procedures in the general culture of Cymbidiums. It must be understood that culture may vary greatly according to locality. Good common growing sense is always a valuable asset. If you are in a locality where others are growing Cymbidiums, find a grower who is doing a good job and have him guide you wherever possible. Always bear in mind, too, that there is no short cut to good culture. You will get from your plants just what you give them in good care.

—8606 East Las Tunas Drive, San Gabriel, California, U.S.A.

• *COELOGYNE MOOREANA*. Coelogynes are almost entirely sufficiently cool loving to find our climate stimulating; planted into "cymbidium" compost and repotted only when really necessary, they grow well, increase rapidly and produce attractive flowers of considerable variation. Quite a score of species and hybrids are available, ranging in colour from snow white through cream to orange browns, always with a labellum of striking colour and texture contrast.

Coelogyne Mooreana has shapely snow white blooms with rich golden orange markings on the labellum. The inflorescence, as with most coelogynes, develops with the new growth; its spike elongates quickly producing the three-inch diameter flowers when the leaves are about half formed. The setting of unfolding young leaves and graceful flowers is charming.

Grown in a bush house with good light and ventilation, *coelogyne Mooreana* will grow into a plant which will please with its graceful well-arranged leaves alone; when in bloom it never fails to arrest attention.

Almost all commercially available coelogyne

species and hybrids will grow under similar conditions, only *coelogyne asperata*, *c. pandurata* and possibly *c. Sanderiana* require artificial heat.

A collection can be made from *c. barbata*, *c. cristata* (in its several varieties), *c. corymbosa*, *c. elata*, *c. Massangeana*, *c. nervosa*, *c. Lawrenciana*, *c. ocellata*, *c. odoratissima*, *c. flaccida*; including such hybrids as *c. intermedia* (*Massangeana* x *cristata*), *c. Memoria Wilhelm Mischoltz* (*c. Mooreana* x *c. Lawrenciana*), which will all grow as easily as a cymbidium hybrid.

A wisely selected collection of coelogynes has species in bloom almost throughout the year.

—G. Hermon Slade.

• QUEENSLAND ORCHID SOCIETY:

—The Annual Meeting of the Queensland Orchid Society was held in Brisbane on Friday, 14th February, 1958.

The report showed that the Society now has more than three hundred members throughout Queensland—a rise of twenty-four in the year.

Highlights of the year's activities were the two shows, which attracted a total attendance of between eight and nine thousand and the publication of another handbook, "Caring For Your Cattleyas".

The election of officers resulted as follows:

Patron: Sir John B. Chandler. President: Mr. E. A. Knoblauch. Vice-Presidents: A. W. F. Kurth; P. G. Cran; Dr. V. R. E. Murray; Miss D. M. Noakes, Bundaberg; Mrs. W. P. Mitchell, Mooloolaba; and A. J. Daley, Boonah. Hon. Treasurer: P. Curley. Hon. Secretary: P. K. Searle. Committee: S. E. Barnett, P. R. Wren, Dr. A. V. Hartwig, W. D. Marshall and C. O. Dunn. Technical Adviser: Professor D. A. Herbert. Hon. Auditors: Goffage and Goffage.

The Queensland Orchid Society has drawn up a comprehensive programme for this year.

The programme aims at giving both new and old members a solid insight into the overall aspects of starting and caring for an orchid collection.

The lectures, which will be illustrated wherever possible, will be:

What is an Orchid?; Starting a Collection—Suitable Plants for South-east Queensland; Housing Orchids; Potting and Composts (with demonstration); Care, Watering and Conditions; Pests and Diseases—stressing control;

Propagation; Cattleyas; Dendrobiums; Vandas and Phalaenopses, Cymbidiums and Cypripediums.

• **ST. GEORGE ORCHID SOCIETY.** The Committee, working hard for this year's Winter Show, to be held in Hunt Bros. Showrooms, Croft's Avenue, Hurstville, on Friday, 11th and Saturday, 12th July, promise a treat for all orchid enthusiasts.

Three distinct classes are scheduled for Orchids and Foliage Plants. A 3 ft. x 3 ft. foliage only exhibit, a minimum 6 ft. x 4 ft., and a maximum 5 ft. x 3 ft. orchids and foliage plants exhibit all should create an atmosphere for the cypripedium classes which are separated into the various predominating cypripedium colours.

The early cymbidiums will be on display and members from any other Society or Club may participate in this *open* Winter Show.

The presentation of this year's Annual Show in the Regent Hall, Hurstville, is two weeks earlier than usual. The Show opens on Monday, 8th September, for three days and nights, Tuesday, 9th September, and Wednesday, 10th September. Setting up day is Sunday, September 7th.

Schedules may be obtained from the Hon. Secretary, H. J. Lawler, 535 Willarong Rd., Caringbah, LB9442, or at the Monthly Meeting held on the first Tuesday in each month at the Methodist Church Hall, Bay Street, Rockdale.

• TASMANIAN ORCHID SOCIETY:—

At the Annual Meeting held 24th March, 1958, the President, Miss J. Sargison, stressed the happy atmosphere that had existed in the monthly meetings of the Orchid Society at Hobart.

The election of officers resulted as follows:

Patroness: Lady Cross. President: Miss J. Sargison. Vice-Presidents: Messrs. F. W. Chilvers and E. Vince. Hon. Secretary: Mrs. R. F. Gee. Hon. Treasurer: Mr. R. F. Gee. Committee: Mesdames Beard and Hilyard, Miss N. Tucker, Messrs. Angel and Fry. Librarian: Miss B. Newman.

Advisory Panel.—This has been inaugurated to help learners, newcomers and frustrated growers of orchids. Misses N. Tucker and D. Thorn, Messrs. F. W. Chilvers and E. Vince.

• **MANNING RIVER ORCHID SOCIETY**.—Former President of the N.S.W. Orchid Society Ltd., Mr. Rothwell and Mrs. Rothwell, were welcome visitors at the March meeting of the Manning River Orchid Society. Besides being a member of the Eastwood Orchid Society, Mr. Rothwell was a former orchid judge. He gave appreciative and helpful advice.

Members of other Societies visiting Taree are always welcome at the meetings, which are held on the second Friday of each month in the Staff Room of the Commonwealth Bank.

• **HORNSBY KU-RING-GAI ORCHID SOCIETY**.—This society meets every third Wednesday in each month at the Killara Memorial Hall. A pleasing report of the attention given to novice growers should pay early dividends. The recent novice growers' quiz session conducted by popular Vice-President Mr. Reg. Quigley was an outstanding success. Members present entered into the spirit of the session and some grand entertainment was provided with the explanations given by novice growers for the various methods and ideas employed by them in the growing and flowering of their orchids. The President, Mr. D. W. Hardie, concluded the meeting with a general discussion on diseases of the orchid leaf and the methods of prevention thereof.

• **PARRAMATTA AND DISTRICT ORCHID SOCIETY**.—Nine times President and founder, Mr. A. J. Webb, of the Society was elected President for a ninth term at the Annual Meeting of the Society on February 3rd, 1958.

Other officers elected were:

Vice-President: Mr. R. Green. Hon. Secretary: Mr. G. Hall. Librarian: Mr. A. Evans. Committee: Messrs. R. Hopkins, R. Briggs, R. Miller, S. Batchelor, P. Daniel, G. Lynch, A. Marks and J. Robertson.

The Society has decided to develop its Winter Show. Hitherto the Society has concentrated on the spring exhibition, but, in view of the growing importance of early blooms for export and the increasing interest of hybridists in early crosses, it is felt that the Winter Show should be enlarged.

This year, for the first time, cash prizes will be offered. The display, confined to members of the Society, will be staged in Grace Bros. Building, Parramatta, on the evening of July 7th. The Show will be opened by the Society's Patron, Mr. C. W. Jefferson.

"At Home" was the atmosphere in which the

Society met on April 14th. The visitors included the President of the St. George Orchid Society and Chairman of Directors of the Australian Orchid Growers Trading Co-operative Society (Mr. H. R. Crutch) and the President of the Western Suburbs Orchid Society (Mr. Vest). A very interesting list of flowers recommended for export was given by Mr. B. Schwartz, who added valuable hints on the using of light and shade for correct flowering of many varieties. A choice of composts was offered by Mr. Schwartz, and if some sounded revolutionary to the more conservative growers, they listened respectfully when they learned that Mr. Schwartz flowers ninety-five per cent of his big pots of cymbidiums. The President of the Parramatta Society (Mr. A. J. Webb) thanked the speaker and exchanged fraternal greetings with the visiting Presidents.

• **ANNUAL FESTIVALS AND SHOWS**.—The following Orchid Societies and Clubs have announced the dates of their Annual Shows:

Hornsby Kuring-gai Orchid Society: Killara Memorial Hall, 15th and 16th August.

St. George Orchid Society: Regent Hall, Hurstville, 8th, 9th and 10th September.

Northern Rivers Orchid Society: Richmond Hall, Richmond, 12th and 13th September.

Orchid Society of N.S.W. Ltd.: Sydney Town Hall, 16th, 17th, 18th and 19th September.

Newcastle Orchid Society: City Hall, 17th, 18th, 19th and 20th September.

Eastwood and District Orchid Circle: Masonic Hall, Rowe Street, Eastwood, 26th and 27th September.

Sydney Orchid Society: R.S.L. Hall, Campsie, 10th and 11th October.

• **N.S.W. ORCHID SOCIETY LTD. AWARDS**.—Continued from Volume 23, No. 1, March, 1958.

Reg. No. 366—Den Thyrsiflorum C.C. H. Crutch—25/11/57.

Reg. No. 367—Aerides Hermon Slade 'Herbert Beaumont'. H.C.C. H. Slade—27/1/58.

Reg. No. 368—Van Mevr. L. Velthuis 'Robert Mills' H.C.C. H. Mills—25/11/57.

Reg. No. 369—Van Nellie Morley 'Russell Mills'. A.M. H. Mills—25/11/57.

Reg. No. 370—Van. Sanderiana 'Molly Mills'. A.M. H. Mills—31/3/58.

Reg. No. 371—B.C. Deese 'Diane'. H.C.C. L. Sasso—15/4/58.

New Orchid Hybrids[†]

NAME	PARENTAGE	FLOWERED BY
<i>November, 1957</i>		
Aeridovanda Rose Spur	Aerides lawrenceae x V. Tatzeri	Mrs. Lester McCoy
Brassocattleya Armin	C. Dupreana x Hartland	M. Yamada
" Starflower	C. amabilis x B. cuculata	C. C. Wood (Loshier & Eubanks)
Brassolaeliocattleya Celina Guinle ...	Lc. Sohmbrosa x Dunsford	E. R. de La Rocque
" John	Eudora x Bc. Hartland	M. Yamada
" Mary Murchison	Bc. Bedelia x Lc. Baldur	Mary M. Fuller (Fields Orchids)
" Norman's Glory	Lc. Gatton Glory x Norman's Bay ...	H. M. Tagawa
" President Ramon		
" Magsaysay	Lc. Britannia x Pastel	Josephine Weeks
Cattleya Alvaro La Rocque	mossiae x Edmond Demunter	E. R. de La Rocque
" Augustinian	S. E. Endicott x Alcileten	E. B. Martin
" George C. Reynolds	Florence W. Dalton x Dinah	Kodama Orchid Nurs.
" Gretchen Louise Hail	Bertii x Ashlands	Emmaline Young (T. Morioka)
" Manzanita	guttata, syn. leopoldii x Sara Cohn	Beall Greenhouse Co.
" Thereza La Rocque	Idettae x Estelle	E. R. de La Rocque
Cymbidium Early Morn	Kookaburra x Charm	A. R. Persson (L. H. Newman)
" Empress	Celia x Priscilla	A. R. Persson (L. H. Newman)
" Florentine	Florette x Windsor Castle	A. R. Persson (Richard Dart)
" Gallant	Gaye x Magog	A. R. Persson (L. H. Newman)
" Joanette	Florette x Joan	A. R. Persson (Richard Dart)
" Kay	Alevanderi x Clianthus	A. R. Persson (Richard Dart)
" Minstrilla	Minstrel x Priscilla	A. R. Persson
" Nepean	Apollo x Stonechat	S. Medcalf (L. H. Newman)
" Patricia Callen	Celia x Almeria	Dr. V. Coppleson (A. R. Persson)
" Peter Pan	ensifolium x Miretta	Dos Pueblos
" Simplicity	Ruskin x Priscilla	A. R. Persson
" Sunarda	Grenadines x Granada	C. Phillips
Dendrobium Alan Zane	Ethel Kawamoto x Hula Girl	Luther Wong (H. Otake)
" American Beauty	Anouk x Lady Hamilton	H. Kushima
" Bertha Yee	442nd Infantry x Robbie Camp	Mary Yee (Hung Ung Young)
" Blue Bell	Neo Hawaii x toftii	T. Kazumura (S. Obata)
" Cerise Delight	Surfrider x Phalaenopsis syn. schroderianum	Mrs. Lester McCoy
" Changri La	Lady Hamilton x Pompadour	H. Hamada (Mrs. McCoy)
" Dean Keller	taurinum x Frederick G. Krauss	Y. Inouye
" Fifi	May Neal x macrophyllum	A. C. Chang
" Gladys Leung	Colonel Pung x schulleri	Nakayama Bros.
" Kiholo	Lum Goo x schulleri	Mrs. S. Noda
" Kilohana	Neo Hawaii x veratrifolium	T. Kazumura
" Mem. Albert Jon	Alice L. Hong x Lady Constance	H. Kushima
" Noppo	Pauline x taurus	T. Kazumura
" Phyllis Lea	Momi Cummins x gouldii	R. H. Leicester
" Ruth Young	Dark Victory x Ethel Kawamoto	Luther Wong (H. Otake)
" Theodore Takiguchi	Valley King x phalaenopsis syn. schroderianum	T. Takiguchi (T. Enomoto)
" Yi Chuan Ching	Sanders Crimson x Hula Girl	D. C. Ai (M. Miyamoto)

Laeliocattleya	Adoration	Adonis x C. Thetis	R. H. Gore—Orchids
"	Diamond Butte	Elizabeth Lind x C. Tethys	Beall Greenhouse Co.
"	Discovery Passage	Elizabeth Lind x Barton	"
"	Emma B. Murchison	C. Fabia x Ravenglass	Mary M. Fuller (Fields Orchids)
"	Gold Cup	Gatton Glory x S. J. Bracey	H. M. Tagawa
"	Golden Reefs	C. Sara Cohn x S. J. Bracey	Beall Greenhouse Co.
"	Halfmoon Bay	luminosa x Barton	"
"	Henry B. Fuller	Princess Prudence x Ravenglass	Mary M. Fuller (Fields Orchids)
"	Hope Island	C. Tethys x Imperial	Beall Greenhouse Co.
"	Luys de Mendonça	Schilleriana x C. Wedding Day	Alex D. Hawkes (M. P. Silva)
"	Mary M. Fuller	Altesse x South Esk	Mary M. Fuller (Fields Orchids)
"	Premier Kishi	Emminence x Oliver Lines	B. G. Miwa
"	Ross	Atlantis x C. bowringiana	Frank J. Ross
"	Sucia Reef	Elizabeth Lind x C. bowringiana	Beall Greenhouse Co.
"	Sunrise Peak	C. Sara Cohn x L. tenebrosa	"
"	Three Esses	South Seas x Sargon	C. Shepherd (Mansell & Hatcher)
"	Zaira La Rocque	Thera x C. mossiae	E. R. de La Rocque
*Laelonia Federation		L. rubescens x Broughtonia lilacina	A. L. Chen
Miltonia Gaius		regnelli x bleuana	M. Yamada
Phalaenopsis Margaret Rose		Doris x Raritan	Robert Bean
"	Mem. Monroe M. Kaya	Doris x Harold Fisher	Earl M. Suyama
"	Rose Bowl	Raritan x sanderiana	Robert Bean
"	Rose Parade	Doris x sanderiana	"
"	Twyla	Atala x Louise Georgiana	R. & T. Okubo (A. C. Chang)
Renades Mahani		Ren. storiei x Aerides lawrenceae	E. P. Perlstein (Mrs. Lester McCoy)
Sophrrolaelia Belle of Bangkok		S. grandiflora x L. flava	Sanders (P. Aphay-wongse)
Sophrrolaeliocattleya Copper Glow		C. Sara Cohn x Slc. Copper Gleam	Beall Greenhouse Co.

*This is a newly created genus.

Correction to September List:

Lc. Velma Voss, R. N. should read Lc. Velma Voss.

Correction to Add. II:

P. 365, Col. 1, L. 32: x Sir Walter Scott, should read x C. Sir Walter Scott. P. 366, Col. 1, Line 1:

Morning Star should read Morning Sun.

Correction to Add. III:

P. 429, Col. 11, L. 18: for Lc. Jac. read Le Jac.

Correction to Main Book:

P. 16, Col. 11, L. 6: L. Aphrodite should read Lc. Aphrodite.

December, 1957

Name	Parentage	Flowered by
Aranda Magdens	Arachnis Maggie Oei x V. scandens	Singapore Bot. Gdns.
Brassolaeliocattleya Charlotte	Viscountess x C. Wandin	E. L. Jephcott (Mansell & Hatcher)
" Hassina	Sabrina x C. Hassallii	Charlesworth & Co.
" Sparkling Gold	Bikan x Plymouth	Rivermont Orchids
Cattleya Barbara W. Fenwick	Mem. W. A. Way x Angelina	Betty von Paulsen (Dr. David Fairburn)
" Bee Odessa Boone	Nell Montgomery x Swan	Carl H. Boone (Fields Orchids)
" Edgewood Pearl	Helen P. Dane x Bobbie Jewel	H. Patterson & Sons (Elenewski Bros.)
" High Tide	Titrianæ x percivaliana	Theodore T. Zuck (Oliver Tucker)
" Magneto	Alberto Toselli x Maggie Raphael	Rivermont Orchids
" Stanley Fouraker	Bow Bells x intermedia	S. R. Fouraker (Rivermont Orchids)
Cymbidium Balkinald	Balkis x Reginald	Sherman Adams Co.
" Capellow	Capella x Swallow	Rivermont Orchids
" Cresette	Susette x Cremona	" "
" Cygnara	Cygnus x Cyzara	" "

Cymbidium	Cygnoda	.....	Cygnus x Ramboda	.....	Rivermont Orchids
"	Dawson	.....	Godwit x President Wilson	.....	" "
"	Fulfillment	.....	Coningsbyanum x Rio Rita	.....	" Sherman Orchid Gdns.
Cypripedium	Actaz	.....	Actaeus x Topaz	.....	Dr. W. Stirling
"	Minnora	.....	Minnesota x Nora Smith	.....	" (A. J. Keeling)
"	October	.....	Charles Keeling x Blagrose	.....	Dr. W. Stirling
"	Pretty Lady	.....	Ballet Girl x Winsome	.....	Sherman Orchid Gdns.
"	Shadow	.....	Doris Black x Sanacderae	.....	"
"	Sputnik	.....	Trojan x Atlantis	.....	Caswell Orchid Gdn.
Laeliocattleya	Adelaide Caswell	.....	C. trianae x Elizabeth Lind.	.....	W. J. Jeal
"	Gay Prince	.....	Bacchante x Prince Yugala	.....	" "
"	General Lee	.....	Lee Langford x C. dowiana	.....	Sanders
"	Henomi	.....	Henry x Naomi	.....	Thornton's Orchids
"	Hene Wozniak	.....	Elissa x Prince Shimadzu	.....	(R. H. Gore)
					(To be continued)

‡ Reprinted by kind permission Orchid Review (Eng.), Nov. to Dec. 1957.

Dendrobiums from India

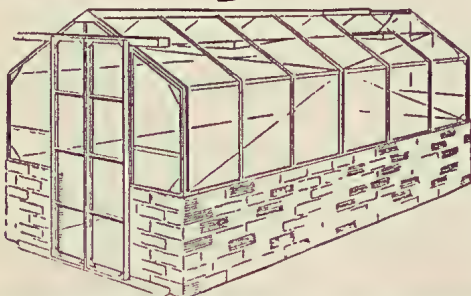
D. Aggregatum, 30/-. Yellow.	D. Moschatum, 30/-. Apricot.	D. Jamesianum, 25/-. White & red.
D. Chrysotoxum, 30/-. Yellow.	D. Pierardii, 30/. Pale mauve.	D. Primulinum, 25/-. Pale to dark mauve.
D. Dalhousianum, 30/-. Cream and fawn.	D. Hildebrandii, 30/-. White & yellow.	D. Fimbriatum, var. oculatum, 25/-. Yellow, maroon throat.
D. Formosum, 30/-. White & yellow.	D. Densiflorum, 25/-. Yellow.	D. Farmerii, 20/-. Pale Pink.
D. Nobile, 30/-. Purple.		

AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet

Price: £91-6-0

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

for

Quality Cymbidiums and Cypripediums

Most Award Cymbidiums in Stock or available from associates. Cypripediums a speciality. Inspection invited to see the method of cultivation under cold conditions and results.

Inspection Saturday afternoon. Sundays only.

TREMORVA ORCHIDS

R. E. Trenerly

24 MURRAY STREET, LANE COVE, N.S.W.

(Off Ralston Street, near Mowbray Road Bus Shed)

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

A CULTURAL TABLE OF ORCHIDACEOUS PLANTS

By J. MURRAY COX

A limited number of copies of this well known book will be available about the middle of June . . . price £4/4/-

THE SHEPHERD PRESS PTY. LTD.

YURONG ST., SYDNEY - FA3178

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

Books on Orchids, Etc.

- ORCHIDS IN AUSTRALIA (Fred Moulén). Full Cultural procedure, 84 full-colour plates. £6. 6. 0. Post 2/-.
- ORCHIDS (Lecouffe & Rose). Col. plates. £1. 8. 3. Post. 9d.
- ORCHIDS ARE EASY TO GROW (Logan & Gosper). A complete manual of Orchid Culture. Col. plates. £3. 15. 0. Post. 1/6.
- ORCHIDS OF GUATEMALA (O. Ames & D. S. Correll). Illust. 2 Vols. £6. 11. 9. Post. 3/6.
- PLANT PROPAGATION PRACTICES (J. S. Wells). Illus. £2. 16. 6. Post. 1/6.
- ORCHIDS—THEIR CULTURE (Bruce Hogg of Melb.). Col. plates. £2. 10. 0. Post. 1/3.
- THE FLOWER SHOW GUIDE (A. W. Wood). Complete directions for Exhibiting, Judging and Staging. Illust. £1. 11. 0. Post. 1/-.
- EXOTIC PLANTS OF THE WORLD—Trans. A. J. Huxley. Col. plates of Orchids, etc. £2. 0. 0. Post 1/6.
- ORCHIDS OF AUSTRALIA (Nicholls). Part 4. Now available. £9. 0. 0. Postage extra.
- CONWAY'S ENCYCLOPAEDIA OF FLOWER ARRANGEMENT. Col. and B/W Plates. £3. 2. 0. Post. 1/6.
- SOIL-LESS GARDENING FOR FLAT AND HOME (Maxwell Bentley). Illust. £2. 0. 0. Post 1/-.
- COMPOST FOR GARDEN PLOT OR THOUSAND-ACRE FARM (F. H. Billington). Illust. 12/6. Post 1/-.
- YOU TOO CAN GROW ORCHIDS (Handcock & Smith). Col. plates. 16/6. Post 10d.
- We search of the world successfully for Rare and Out-of-print Books.
- Also New and Second-hand Books on Australian, Pacific, Art, Natural History, Gardening, Orchids, Biographies & General Literature. Lists Free.
- We are Specialists in Microscopes, Prismatic Binoculars and Day and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.
- 10X British Aplanatic folding Magnifiers—of great use to Orchid lovers. £2. 18. 6.

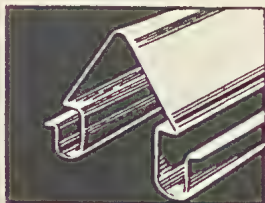
N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
 49 Aird Street, Parramatta — YL9961
 135 Forest Rd., Hurstville — LU2066
 67-69 Burelli St., Wollongong—B3301-8
 932 Pacific Highway, Chatswood—JA3462

Cypripedium Maudiae

This green and white "CYP" a favourite over the years.
 Mottled Foliage — Warm Growing — Best at Cattleya
 Temperatures

Maudiae produces two crops each year—very prolific—
 peaks in December and June.

Finest money maker for the commercial grower—The
 most attractive orchid plant for home display and growing.

£2. 4. 8. for 4" Pot having a mature growth "plus"

(Never before offered at these low prices)



Rod McLellan Co.

1453 El Camino Real
 South San Francisco, Calif.
 U.S.A.

Quantity discounts
 also apply on this
 remarkable special

Importers
 Exporters
 Hybridizers

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(*Cymbidium Lillian Stewart, 'Mona Lisa'*)

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisosa) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!



No. 24
(See List "Limberlost" Seedlings below)

*Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas*



"LIMBERLOST" Orchid Seedlings

*First General Offering of Orchid Seedlings to Old
and New Growers. Fascinating Hybrids that will bring
both Pleasure and Profit as they mature.*

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10 V. Tatzeri x V. Caroline Robinson
- No. 11 V. Sanderiana x V. Rothschildiana
- No. 13 V. Mary Foster x V. G. Myamoto
- No. 22 V. E. Fujinaga x V. Sanderiana
- No. 29 V. G. Triboulet x V. Coerulea
- No. 25 V. Haleakala x V. Sanderiana
- No. 31 V. Teres Giganteum x V. Hommage a Segovia
- No. 37 V. Tatzeri x V. Coerulea
- No. 56 V. Hommage a Segovia x V. Joaquim Atherton
- No. 46 V. Sanderiana x V. Suavis
- No. 26 V. Henrietta Ho x Renanthera Storiei
- No. 35 V. Dearei x Arachnis Ishbel
- No. 40 Phalaenopsis Denevei x Arachnis Ishbel
- No. 36 V. Henrietta Ho x Arachnis Ishbel
- No. 30 V. Henrietta Ho x Arachnis Maggie-Oei
- No. 55 V. Alice Fukunaga x Arachnis Maggie-Oei
- No. 60 V. Tatzeri x Arachnis Maggie-Oei
- No. 24 D. Schroederianum var. bicolor
- No. 27 D. Janice Tanaka x D. Broomfieldii
- No. 39 D. Broomfieldii x D. Phal. var. Snow White
- No. 48 D. Bigibbum x D. Veratrifolia
- No. 49 D. Bigibbum x D. Broomfieldii
- No. 57 D. Tofftii x D. Phal. var. Snow White
- No. 58 D. Phal. var. Snow White x D. Grantii
- No. 62 V. Dearei x V. Joaquim var. Atherton
- No. 59. Oncidium Lanceanum
- No. 135. V. Coerulea x V. Coerulea
- No. 71. Tatzeri x Arachnis Insignia

(Assorted if desired)

Above Plants: size (2"-3") 7/6 ea.; £4/4/- per doz., ex Community Pots.
Special Quotes for smaller size COMMUNITY PLANTS on application.

- No. 13. V. MARY FOSTER x GERTRUDE MYAMOTO. Advanced seedlings. 6"—25/- ea.
- No. 24 DENDROBIUM SCHROEDERIANUM var. BICOLOR. Flowering size—21/- ea.
- No. 35. ARANDA FRECKLES. Advanced seedlings, 8"—15/- ea.
- No. 26 VANDA HENRIETTA HO x RENANTHERA STORIEI. Advanced seedlings. 8"—25/- ea.
- No. 39.. D. BROOMFIELDII x D. PHAL. VAR. SNOW WHITE near flowering size—25/-.
- No. 36. V. HENRIETTA HO. x ARACHNIS ISHBEL. Advanced Seedlings 8"—15/-.

Please add 7/6 with orders to cover Air Freight and forwarding charges.
If phone number, please add.

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.Q.



"LIMBERLOST"

Orchid Seedlings

"ORCHIDS AND OTHER PLANTS" NEW 16 PAGE CATALOGUE AVAILABLE, OVER 40 PAGES, COMPRISED OF 13 INDIVIDUAL LISTS COVERING A WIDE RANGE OF CULTIVATED PLANTS. INQUIRIES INVITED.

COMMUNITY POTS. $\frac{1}{2}$ " to 1" plants. 8 Seedlings per pot, 20/- per pot.

- No. 13. V. M. Foster x V. G. Myamoto
- No. 24. D. Schroederianum bicolor
- No. 37. V. Tatzeri x V. Coerulea
- No. 39. D. Broomfieldii x D. Phal. Snow White
- No. 57. D. Tofftii x D. Phal. Snow White
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei
- No. 35. V. Dearei x Arachnis Ishbel
- No. 36. V. Henrietta Ho x Arachnis Ishbel
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei
- No. 60. V. Tatzeri x Arachnis Maggie-Oei
- No. 63. V. Henrietta Ho x Insignis
- No. 71. V. Tatzeri x Arachnis Insignis
- No. 75. V. Tatzeri x Arachnis Ishbel
- No. 135. V. Coerulea x V. Coerulea
- No. 134. Superbum giganteum x D. Superbum huttonii
- No. 136. V. Suavis x V. Manila
- No. 141. V. Kon Tiki x Opsisanda Kenneth Morley
- No. 151. V. Kon Tiki x V. Manila
- No. 149. Cymbid. Alofolium x C. Bicolor

- No. 153. V. Queenie Pie x V. Manila
- No. 164. V. Ellen Noa x V. Suavis
- No. 148. V. Tatzeri x V. Manila
- No. 189. D. Sanders Crimson x D. P. Peterson
- No. 175. D. Auricleii x D. Phal. Snow White
- No. 193. D. Dicupham x D. Canaliculatum pallidum
- No. 200. V. Manila x V. G. Triboulet
- No. 242. V. Diana x V. La Paloma
- No. 232. D. Sanders Crimson x D. (N/Guinea Ceratobium) *103.
- No. 166. V. A. Fukunaga x Denisoniana herbraica
- No. 138. V. Tatzeri x Renanthera Storici
- No. 89. V. Coerulea x V. Dearei
- No. 184. V. Manila x Opsisanda K. Morley
- No. 264. D. Mirabellianum x D. Bigibbum
- No. 142. V. Manila x V. A. Fukunaga
- No. 147. V. Tatzeri x V. Suavis
- No. 177. D. Phalaenopsis alba x D. Phal. Snow White
- No. 176. D. Schroederianum alba x D. Phal. Snow White

COMMUNITY POTS. $\frac{1}{2}$ " to 1" plants. 8 Seedlings per pot, 30/- per pot.

- No. 61. D. Phalaenopsis var. Snow White x self
- No. 97. V. M. Dinger (Java) x V. A. Fukunaga
- No. 105. V. Carol Hirano x V. Coerulea
- No. 160. D. Pompadour x D. Phalaenopsis Ruby
- No. 163. (D. Phal. FCC x self) x Pompadour
- No. 178. D. Pompadour x D. Schroederianum FCC self
- No. 194. V. Terea Alba x V. Ellen Noa

- No. 205. D. P. Peterson x D. Phal. FCC self
- No. 230. Epi. Mariae x Laelia Majalis alba
- No. 260. V. Waipuna x V. Sanderiana
- No. 28. V. Iolani x V. Sanderiana
- No. 229. Epi. Mariae x Laelia Majalis Alba
- No. 255. D. Anouk x D. Agnes Ann

COMMUNITY POTS. 1" to 2" plants. 5 Seedlings per pot, 20/- per pot.

- No. 13. V. M. Foster x V. G. Myamoto
- No. 24. D. Schroederianum bicolor
- No. 27. D. Broomfieldii x D. J. Tanaka
- No. 37. V. Tatzeri x V. Coerulea
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei
- No. 35. V. Dearei x Arachnis Ishbel
- No. 36. V. Henrietta Ho x Arachnis Ishbel
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei
- No. 60. V. Tatzeri x Arachnis Maggie-Oei
- No. 71. V. Tatzeri x Arachnis Insignis
- No. 39. D. Broomfieldii x D. Phal. Snow White
- No. 40. Phal. Denevei x Arachnis Maggie-Oei
- No. 46. V. Sanderiana x V. Suavis

- No. 48. D. Bigibbum x D. Veratrifolia
- No. 49. D. Bigibbum x D. Broomfieldii
- No. 57. D. Tofftii x D. Phal. Snow White
- No. 58. D. Phal. Snow White x D. Grantii
- No. 134. D. Superbum giganteum x D. Superbum huttonii
- No. 135. V. Coerulea x V. Coerulea
- No. 59. Oncidium Lanceanum
- No. 175. D. Auricleii x D. Phal. Snow White
- No. 29. V. Gilbert Triboulet x V. Coerulea
- No. 25. V. Haleakala x V. Sanderiana
- No. 10. V. Tatzeri x V. C. Robinson
- No. 11. V. Rothschildiana x V. Sanderiana

COMMUNITY POTS. 1" to 2" plants. 5 Seedlings per pot, 30/- per pot.

- No. 22. V. Sanderiana x V. E. Fujinaga
- No. 97. V. M. Dinger (Java) x V. A. Fukunaga
- No. 61. D. Phalaenopsis Snow White x Self

- No. 105. V. Carol Hirano x V. Coerulea
- No. 163. D. Phal. FCC self x D. Pompadour
- No. 194. V. Terea Alba x V. Ellen Noa

PLEASE ADD 7/6 AIR FREIGHT AND FORWARDING CHARGES FOR FIRST THREE POTS, 2/6 EACH ADDITIONAL TWO (2) POTS.

SEEDLING CULTURAL CHARTS SUPPLIED FREE ON REQUEST.

PHONE 9262

J. E. Jones,

"LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS, NTH QSLD.

UNSURPASSED QUALITY
ORCHIDS

by

(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and
yellow.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Primulinum, 25/-. Pale to dark
mauve.
D. Fimbriatum, var.: oculatum, 25/-
Yellow, maroon throat.
D. Farmerii, 20/-. Pale pink.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/-. Pale mauve.
D. Hildebrandii, 30/-. White and
yellow.
D. Densiflorum, 25/-. Yellow.
D. Jamesianum, 25/-. White & red.

AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

MON., JUNE 30th

MON., JULY 28th

MON., AUG. 25th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

FRI., JUNE 13th

FRI., JULY 11th

FRI., AUG. 8th

Patron: Sir JOHN B. CHANDLER, Swann Road, Taringa, S.W.1.

President: E. A. KNOBLAUCH, Denham Terrace, Wellers Hills, Brisbane.

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY, 59 Armentieres St., Kedron, Brisbane.

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

MON., JUNE 16th

MON., JULY, 21st

MON., AUG. 18th

President: G. E. FLOYD, 25 Grand View Rd., Nth Brighton. Phone XM4996

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide

THURS., JUNE 5th

THURS., JULY 3rd

THURS., AUG. 7th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: R. J. LANGDON, 8 Regent St., Millswood

Hon. Secretary-Treasurer: F. C. BRIDGE, Elizabeth St., Woodside. Phone 01, Woodside 69.

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

FRI., JUNE 27th

FRI., JULY 25th

FRI., AUG. 22nd

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Hon. Secretary: H. W. HILL, 20 Waterford St., Inglewood.

Hon. Treasurer: A. A. FARRANT, 32a Coode St., Mt. Lawley.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* Miss J. Sargison. *Hon. Secretary:* Mrs. H. S. Watson.
Cambridge, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



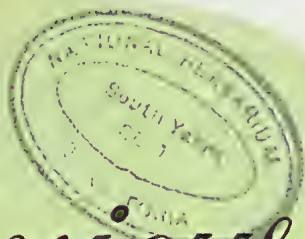
Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review

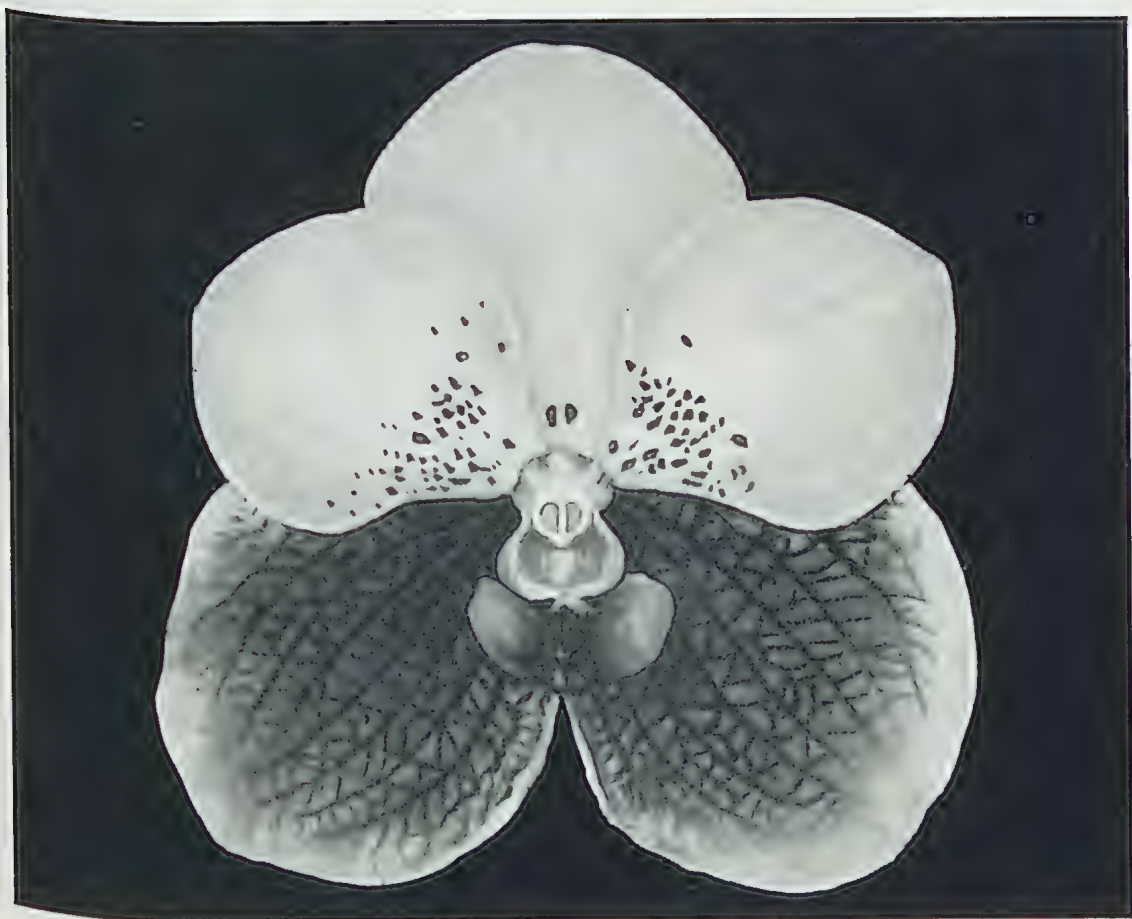


PUBLISHED QUARTERLY

VOLUME 23. No. 3

PRICE 3/6

SEPTEMBER, 1958



VANDA SANDERIANA 'MOLLY MILLS' A.M.

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

The Illustration below depicts Orchid splendour at Frank Slattery's Nursery.



Orchids

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

Here is an excellent opportunity to add new varieties to your collection at reasonable cost. These are sturdy bush house grown plants in 4" pots, sizes vary from 5" to 8" or more high.

Pearl Mag. x Olympus 'Rosy Queen'	.....	10/-	each
" " x Rusper 'Waverley A.D.'	.....	10/-	"
" " x Pink Beauty	.....	10/-	"
" " x Midlothian 'Greensleeves H.C.C.'	.....	15/-	"
Sussex "Laelia Sasso" x Pearl Mag	.....	20/-	"
" " " x Monica The Finest	.....	10/-	"
" " " x Athens 'Tanandra'	.....	15/-	"
" " " x Profita 'Luath H.C.C.'	.....	20/-	"
Alex "Westonbirt" x Midlothian 'Greensleeves' H.C.C.	.....	15/-	"
" " " x Firebird 'Dover Heights'	.....	15/-	"
" " " x Blue Smoke (California)	.....	20/-	"
" " " x Pearl Mag.	.....	15/-	"
Cariga "Sorrento" x Swallow	.....	15/-	"
" " " x Sussex 'Laelia Sasso' H.C.C. and A.D.	.....	20/-	"
" " "Julia" x Swallow	.....	10/-	"
Lucifer "Diane" x Pink Beauty	.....	10/-	"
Sparta "Etna" x Carisbrook 'Brick' A.D.	.....	10/-	"
Pauw. C. DE. H. x Carisbrook 'Thelma' A.D.	.....	15/-	"
Redcap "Hoggs" x Sussex 'Laelio Sasso'	.....	15/-	"
Balkis "Luath A.M." x Carisbrook 'Bexley' H.C.C.	.....	20/-	"

LATEST HAWAIIAN STRAP LEAF & SEMI-TERETE VANDAS

Prices. 3 sets of leaves £3 per plant. 4½ to 5 sets £4. 6 to 7 sets £5
Nearing flowering size, £7/10/-.

V. Sanderiana x Manilla (Bill Sutton)	V. Betsy Summer x Sanderiana
V. " " x Honolii	V. Rothschildiana
V. " " x Joan Swearingen	V. Rothschildiana x Manilla
V. " " x Rose Davis	V. Iwasaki x Rothschildiana
V. " " x Ohu-Ohu	V. Trisker x Rothschildiana
V. " " x Sauvis	V. Mary Foster x Rothschildiana
V. Honolulu x Sanderiana	V. Ellen Noa x Clara Fisher
V. Sanderiana	V. Manilla x Tatzert
V. Trisker x Sanderiana	V. Laukapu
V. Tita Mark x Sanderiana	V. Honolulu
V. Laukapu x Sanderiana	V. Ohu-Ohu
V. Sauvis x Sanderiana	

In some crosses only small plants are available so please give second choice when ordering.

SEMI-TERETE TYPES. Only small plants available

V. Emma Van Deventer x Ellen Noa	V. Velhus x Sanderiana.
V. Emma Van Deventer x Rothschildiana	
V. Nelly Morley John Noa's famous No. 512 cross.	2 to 2½ Sets Leaves, £2 per plant
	3 or More Sets Leaves £2/10/- per plant.

PLEASE ADD FREIGHT WITH ORDERS

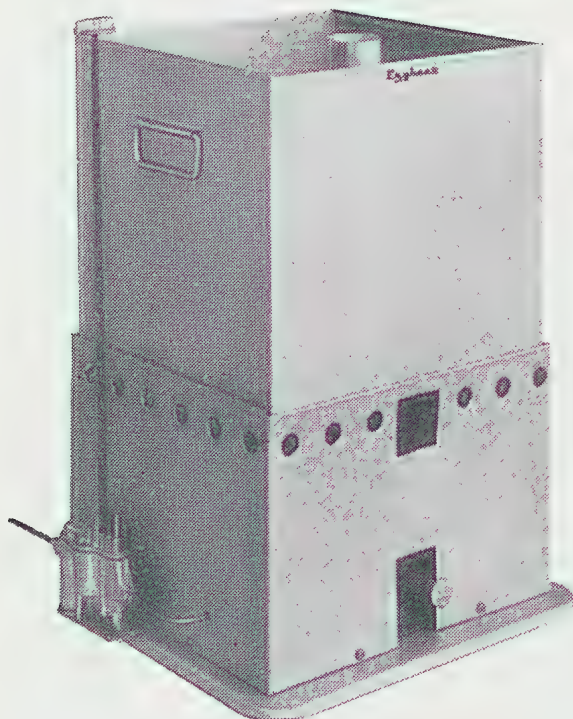
Beginners welcome and all assistance given. Open 7 days weekly.

Frank Slattery's

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985



Just Released!

"ezyheat"

**HOTHOUSE
& AQUARIUM
KEROSENE
HEATER**

£18-10-0

Heat output is sufficient for a standard 9' x 12' glasshouse. A large removable water reservoir keeps the air moist.

THE BURNER is the patented "Billar" burner . . . operates without wicks or asbestos, cleaning only once yearly.

THE CONTROLS have the famous "Ezyheat" control valve unit.

THIS HEATER OPERATES 24 HOURS ON ONE GALLON OF KEROSENE.

The EZYHEAT HOTHOUSE HEATER is the result of eight years of research and practical tests and is designed for the average horticulturist wanting a constant warm, humid and CLEAN atmosphere.

By concentrating solely on a solid construction and first class performance, without luxurious trimmings, it is possible to bring the unit well within the reach of every amateur or professional, at the reasonable price of £18/10/- f.o.r. Melbourne.

The EZYHEAT HOTHOUSE HEATER can be directly connected to a standard 44 gallon drum or to a large tank obtainable from an Oil Company. If solely for agricultural or horticultural purposes these drums or tanks can be loaned on payment of a deposit.

Standard 2" downpipe can be affixed to the chimney leading the exhaust gas OUTSIDE the hothouse eliminating any risk of contamination of your plants by CO₂ or other harmful effects. If employing a zig-zag outlet, approx. 20% more heat is retained in the hothouse.

At small extra cost we will supply a tap with built-in strainer to fit the drum or tank. All other parts are obtainable at low cost.

Send us a rough drawing of your hothouse giving the major dimensions, location and height of benches, width of passages, etc. We will send you—FREE OF CHARGE—our advice how to install the hothouse heater to the greatest advantage and a detailed statement of the total cost including tap, strainer and fuel pipes.

YOU CAN RUN AN EZYHEAT HOTHOUSE HEATER ON SEVEN GALLONS OF KEROSENE
FOR ONE WHOLE WEEK—DAY AND NIGHT

PANTAS **PTY.**
LTD.

205 LATROBE STREET, MELBOURNE. PHONE FB 3744 or FB 3746
(between Swanston and Elizabeth Streets)



dos pueblos presents *Samarkand*

Heathrow 'Mary Bea' x Alexanderi 'Westonbirt' FCC/RHS

This is typical of the progeny resulting from Dos Pueblos crosses . . . many seedlings of which are now available in Australia for the first time.

One of the seedlings we have at present—D.P.4042 Heathrow 'Mary Bea' (2n) x Rosanna 'Pinkie' FCC/RHS (4n)—is expected to be even better than "Samarkand". Rosanna 'Pinkie', of course, was evolved from famous Alexanderi 'Westonbirt' and it has here been used with one of the most highly regarded greens. We expect to see many yellow to light green tints along with the more usual blush shades in this cross.

These seedlings are now about 10-12 inches high . . . Price 70/- each.



YORK MEREDITH
Managing Director

Orchid Company

(AUST.) PTY LTD.

SOUTH CREEK ROAD, DEE WHY WEST • New Telephone Number—XW6333

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give
Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND

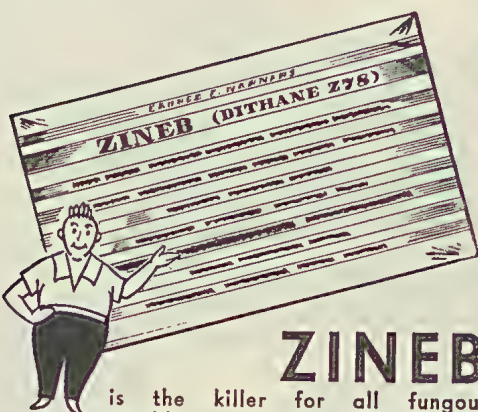


We have a limited number of FLOWERED Cattleyas, FLOWERED Cypripediums and FLOWERED Cymbidiums for sale and are able to despatch to Australia throughout our winter, due to our proximity to London Airport.

We do not at present issue a catalogue, but lists of plants will be willingly sent to enquirers. Please state in what genera interested.

We do not sell community pots or small plants.

4 Winners From George C. Warner's



ZINEB

is the killer for all fungous troubles. Prevents and arrests Black Spot and Black Rot. Non-poisonous; will not burn the most tender foliage. 1 oz. for 2/6 makes 4 gallons; 8 oz. for 10/-; 1½ lb. for 22/6.

CARBAM

Kills Weeds
Nematodes
Insects

George C. Warner's CARBAM is a comprehensive soil sterilant and fumigant for orchid growers. It is a liquid that converts to a gas in the soil . . . ends costly competition from weeds, soil insects, nematodes. The soil can be used after 14 days. 16oz. bottle—16/-; 4 gallon Drums—£4 per gallon.



FOLI 8

is the spray fertilizer that really brings results. Crammed with the right quantity of Nitrogen, Phosphates and Potash, FOLI 8 is 50 times more potent than animal manure and much more economical. 4 oz. packet 2/-; 1 lb. carton 5/-, 5 lb. packets, 15/-.



FASTER
PLANT
GROWTH
with
**FORMULA
20**

Just a few drops work wonders. Formula 20 is a scientific combination of 10 plant Hormones that creates fast, vigorous growth. Full directions with each bottle—1/6 and 5/6.

Products of George C. Warner Laboratories Pty. Ltd., Pound Rd., Hornsby

ORCHID SUPPLIES

from FRANK SLATTERY

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

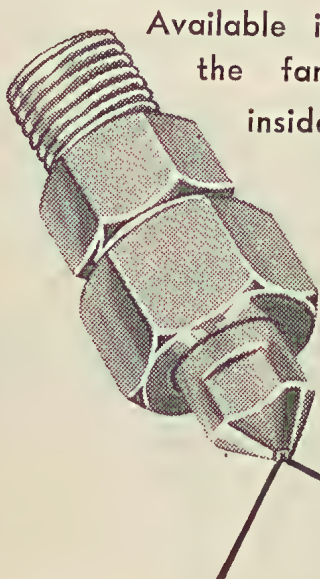
Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 8d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

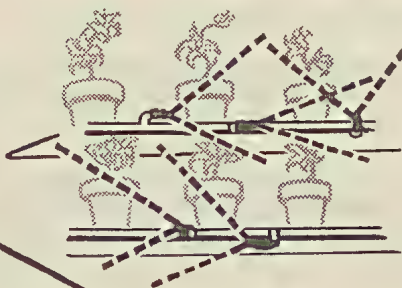
Australian Topea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "MONARCH"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT

**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes from about 10" to full flowering size, at prices ranging from 30/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown Odontiodas, flowering size.

Odontioda ARIITEA, for strong dark reds.

Odontioda BALEK, likely to vary from brick red to light red and orange.

Odontioda SALAM, flowering size seedlings, for very large flowers, pure red or pastel, sometimes purple and white lip.

Miltonia seedlings, flowering size, many fine crosses to give the darkest clear reds that are ever likely to be achieved.

Plants of Lycaste Brugense, F.C.C., R.H.S. x Macrobulbum Youngii, A.M., R.H.S.

Plants of Lycaste Sunrise x Bailliae, Lycaste Brugense, and Lycaste Cruenta.

I have a very large stock of Cattleya seedlings in all sizes for you to select from. These range in price from 25/- for small seedlings, and from 45/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHID HOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

John Bisset

For Orchids, Bush-house and Glass-house plants. We have one of the finest collections of foliage and indoor plants in Australia. Inspection is cordially invited at both our nurseries.

JOHN BISSET

Show Nursery:

8 Brisbane Avenue, East Lindfield, N.S.W.

Phone: JM1906

Sundays

General Nursery:

48 Wareemba St., Abbotsford, N.S.W.

Phone: WF8124

Week Days.

Publisher and Distributor of:

CYMBIDIUM CULTURE & VIRUS DISEASES, £1/1/- 1/- Postage
"ORCHID HANDBOOK" BY N.S.W. ORCHID SOCIETY, 8/6.
CULTURE & AWARDS OF ALL GENERA. 6d. postage.

The World's Most Eminent and Successful Breeders of Outstanding Hybrids

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application. . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids.

*Six superbly sturdy
seedlings, 4
sturdy bulbs from 2 inch
pots, to flower
after
two years:*

Cattleya Annette x L. C. Cynthia alba Model.
Cattleya Ballantineana x B. C. Hartland.
Cattleya Aurea x B. L. C. Cadmium.
L. C. Clothilde x B. L. C. Nugget.
L. C. Nina splashed x C. Hardyano—Warnerii.
B. L. C. Hartfield extra dark x Cattleya Horatius.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges paid, and insured—for—Twelve pounds ten shillings sterling.

Illustrated Catalogue and Lists sent upon application.

STUART LOW (Benenden) LTD.

JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

Cymbidium Champions

48 AWARD AND SHOW TYPE VARIETIES

ALEX. W. x ALEX. ALBUM
(Pure White).
ARABELLA, MAGNIFICENT,
H.C., A.M.
ARABELLA, WAVERLEY, H.C.
(twice) A.M.
BALKIS LUATH, H.C., A.M.
(1957 GRAND CHAMPION)
CARISBROOK, FLORENCE,
A.D.
CARISBROOK, PLUM (Early).
CASSANDRA, EVADNE, A.M.
CASSANDRA, TOXTETH, A.M.
CELIA, TANANDRA (Prize
Green—Early).
CERES, F. J. HANBURY, A.D.
(twice).
CERES, GIRRAHWEEN, A.M.
CERES, WESTMINSTER
(special pink).
CHARM, ELEGANCE, A.M.,
H.C. (Early).
CORDELIA KURINGAI, A.D.
(Colour Champion).
CYGNUS, JANET (large, cin-
namon).
CYGNUS, OPALESCENCE, H.C.
ESMERELDA (Prize Green).
FALCON, HABERFIELD,

FLAMINGO, ALLAMBI, H.C.
(twice).
GIRRAHWEEN, ENID, A.M.,
1st Class Certificate.
GIRRAHWEEN, GLORIA, A.M.
GLORIANA, TUDOR ROSE,
(The Champion Pastel Pink).
HISTORIAN, LINDFIELD,
H.C.
INCA (White Pink. Excellent
Shape and Texture).
ISPAHAN, MASCOT, H.C.
(twice).
JANETTE, GOLDEN CROWN,
A.D.
JOYANCE CINNAMON, H.C.
JOY SANDER, RUTH, H.C.
LOUIS SANDER, GIRRAH-
WEEN (A Champion Pastel
Pink).
LOUIS SANDERS, KIRRIBILLI,
A.M., (twice).
MIRANDA, MAISIE, A.M.
NIRVANAH, WARRINGAL,
H.C.
PERI. Good Big. Yellow/Lime
Green.
PLOVER, No. 1. (Excellent
Green).

PRESIDENT WILSON, HAB-
ERFIELD.
PRESIDENT WILSON, RAP-
TURE, H.C.
PRINCESS ELIZABETH, THE
GIANT.
PRINCESS MARGARET, HAB-
ERFIELD.
PRIAM ADA MEECH, H.C.
(Twice).
PROFUSION VIOLACIA. (Pink
Champion).
PROMONA, TANANDRA, A.D.
SANDPIPER, PENGILLY.
(Lovely Large White, Good
Shape).
STONECHAT, Elouera (cham-
pion pastel green).
SUSSEX, LAELIA SASSO, H.C.
(twice) A.D., A.M.
SWALLOW, CONQUEST, H.C.
(twice).
SWALLOW, DAFFODIL, H.C.
(twice), A.M.
SWALLOW, MAGNOLIA, H.C.
SWALLOW, SOULANGEANA,
A.M. (twice), H.C.

YOUNG GREEN PLANTS: For any 6 of the above varieties, £30; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

EXPORT AND WESTONBIRT VARIETIES

Six flowering size green plants (leading green bulbs with leads), all different varieties, £15; per dozen, £25.

SPECIAL: Twelve dozen only young first-year green plants grown from back bulbs (with the back bulbs still attached in nearly all cases), well established, healthy and guaranteed—£16 per dozen, or £150 for all 144 plants.

MAIL ORDERS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS"

Available free on request. Lists the best-known official award varieties, shows awards won and the prices of various size plants.

Haberfield Orchid Nursery

*The Oldest Established Commercial Cymbidium
Specialists in Australia.*

37 Dobroyd Parade, Haberfield (Sydney), N.S.W. Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2536

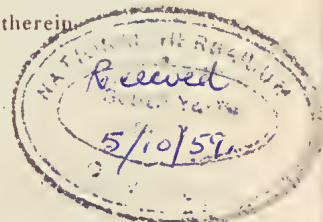
Australian Orchid Review

VOLUME 23

SEPTEMBER, 1958

No. 3

The author of each article is responsible for the facts and opinions expressed therein.



Contents

ARTICLES

Appreciating Nature's Freaks— <i>J. N. Rentoul</i>	119
Book Review	127
Distant Hills— <i>G. H. Slade</i>	137
New Orchid Hybrids	146
News and Notes (Front Cover 130)	118, 127, 134, 136, 144, 145
Oncidiums and Their Allies— <i>W. W. G. Moir</i>	141
Orchid Club of South Australia, Winter Show	138
Orchid Culture in Spring— <i>H. J. Lawler</i>	131
Pauwelsii, My	116
Sobralias— <i>G. H. Slade</i>	137
Spring Shows	145
Victorian Orchid Club, Winter Show	135
Western Australia Orchid Society	130
W. Fahey (The Late), An Appreciation	124
What is an Orchid?— <i>P. K. Searle</i>	125
Winter Show of N.S.W. O.S.— <i>F. Jones</i>	128

ILLUSTRATIONS

Cymbidium Brissie 'Evelyn'	122
Cymbidium Girrahween 'Enid'	122
Laeliocattleya Hertha A.M.	121
Laeliocattleya Sari	121
Laeliocattleya Sennora 'Lustre'	121
Miltonia Purple Queen	139
Oncidium Dr. Schragen	139
Oncidium Sphacelatum	140
Oncidium Varicosum	139
Oncidium Variegata Type	140
Renanthera Brookie Chandler, H.C.C.	122
Sobralia Macrantha	139
Vanda Sanderiana 'Molly Mills' A.M.	Front Cover

Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:
P. G. Cran
Francis Tce.,
Taringa

VICTORIA:
J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA
N. Christoph
18 Clinton Ave.
Myrtle Bank

WESTERN AUSTRALIA
A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:
F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising, neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

My Pauwelsii

• As the Orchid Festivals and Shows are with us once again, I was interested to read the various schedules which have been compiled by committees consisting of ninety-nine per cent of "amateur" growers, to induce *open growers*, *novices* and *members only* to display their wares. Wares!! Yes.

Perhaps this fact is better understood if I relate a recent visit to a monthly meeting of an Orchid Society.

My master placed me in the far corner of the venue for the evening and trusted me to concentrate and gain the latest orchid gossip for this Review.

It was 7.30 p.m. and as yet members of the committee were busily erecting tables for the receipt of plants for competition. The plants were carried by members through the rear entrance of the hall, and their names entered in an imposing volume by the recorder for the evening. The open growers were brazenly using many incorrect varietal names as proof of their personal ownership of the whole clone. The novice growers were apologetically entering their "pride and joy", and just as furtively quickly placing their plants on the novice table and hurriedly retreating from the scene of what was now a miniature market.

The "amateur" open growers were arranging their plants to please the judges. First one way, then on a pot, then on a box, and finally it occurred to me that this pretence was just to permit would-be purchasers of the back bulb, swinger or the entire plant, to ascertain the probable price. Always the answer seemed to be, "see me during the popular vote interval".

This answer was, of course, to gain time to ascertain just how many would-be buyers there were, and the final price therefore could be arrived at by the usual "I have been offered so much, etc."

At the front entrance of the hall members were greeted with a cheery "Good evening" by the Treasurer. As at this particular meeting subscriptions were due, this entrance seemed to be used only by the professional growers and the orchid exporters. Representatives of these firms were very early arrivals. The professional grower, who was the principal of a firm which auctioned plants, was receiving slips of paper like an S.P. bookmaker in the corner of a local hotel. The slips no doubt contained a list of plants to be offered at the next sale. As

there were three plants, a bulb and a lead in each pot, of the one clone of one of my relatives to be sold, I imagined the plant had been massacred to gain extra money by a recent break-up. It was winter time and no new roots would be present to aid the pieces to gain health and strength before they became the property of some unsuspecting buyer, who may have been a real amateur or novice grower.

An exporter of blooms was busily ascertaining the expected crop for the season from established "amateur" growers. There seemed to be some haggling over prices per bloom because of a recent formation of a Co-operative Society.

According to some growers there was a number of the members conspicuous by their absence because they did not have a plant in flower worthy of submitting to the judges for competition. Club spirit was thought to be that which could be poured into the whisky glasses which were prizes for winners of the various sections in the monthly competition.

As the meeting commenced and the President welcomed three new members, many necks were craned to memorise the faces of these prospective orchid buyers. Two or three old hands had already produced a visiting card from a purse or a pocket ready to greet the new chum with a "pop down and see my plants one Sunday morning". This approach was the only amateurish characteristic I noted during the evening.

Next item on the agenda was an appeal for members to come forward and aid the committee to produce the Annual and Winter Shows. Unearthly silence greeted the request, with the usual critics of the committee tying up their shoe laces or retrieving spent matches from the floor. I wondered just how many matches have to be gathered to kindle the boiler, for presumably they can be used by orchid growers for no other reason. It does seem strange that matches can always be discerned in hidden positions on the floor at appeal-for-help time.

Thinking that his voice had not been loud enough to penetrate beyond the din created by the judges, who were warming up to their quite easy task of judging the best *phalaenopsis* against the best *odontoglossum* for the miscellaneous winner, the President repeated his request and suggested that as members may be of a retiring nature he would deem it a favour if

he was approached during the popular vote interval. I did notice that when this did occur, the members who did offer their services were really retiring—all over the age of sixty and most of them able to stage the three inch pot size plants. Perhaps miniature cymbidiums will have their day after all.

Some enthusiastic members had been kind enough to donate some plants for auction to gain funds for the year. The Secretary tried very hard to obtain an extra shilling or two by this means. Husbands and wives showed their affection for each other by holding hands while the auction proceeded—or did this unusual behaviour take place merely to prevent the other half of the marriage pact from raising a hand to produce a bid? As the eagle eyes of the auctioneer were quick to note any sign of movement, the presence of a flea or a mosquito was ignored by the members and left for future attention. The unattached members finally bought the plants, whilst the wise ones noted the prices and offered pieces of the same plants to their neighbours at a slightly lower price.

Discussion of the Show Schedule followed and the champion orchid of the Show was now the contentious problem. The novices and the new members had no say. The "amateur" open growers decided that the champion should not be permitted to be considered should it be exhibited in a trade or professional exhibit.

They did not worry that the champion may not be the best orchid in the hall, and, even though the trade must have had the plant and grown it for the preceding six months, they did not believe it was fair for an "amateur" to compete against a professional. Like our "amateur" tennis players, the very thought of professionalism was repugnant until the money derived from the amateur source became a substantial part of their income. Selling flowers, plants, glass houses, exporting blooms and making compost, etc., was considered to be still lily white.

The President wisely left the matter to be discussed by committee and adjourned the meeting for the popular vote.

Various groups separated to discuss the topical subjects and after listening I believe that an answer could be found to create a real amateur who would finally be much better off than he or she is today; the position after a trial period could be reviewed to suit local conditions assuming that the following rules were passed:

1. An amateur is one who sells to the trade only.

2. A trader is one who sells one bulb, one piece of an orchid or more, or buys and sells flowers.

An amateur could still sell all blooms to exporters or florists as they are traders. Plants would have to be sold to the trade. If your best friend flowered a new orchid and did not want to exchange a piece of his plant with you because he needed money, then you would approach your nearest trader and tell him of your friend's plant. The trader pays the friend, you pay the trader. The difference in the price would be the just and fair legitimate profit that all traders would be entitled to.

Prices would level off for clones already over produced. You would know the ruling price for all the popular orchids and as such all growers would know just how much to take for plants which have outgrown their pots. If new growers pay five pounds for a bulb and a lead then surely a reasonable price would be offered for *well grown* excess orchids. Growers would have to cultivate their plants properly. There would be no plant just placed in a pot and auctioned or sold a week or two later.

Perhaps you say "who is going to police the rules?" There are many, many laws and regulations still in force in every country of the world which have never been enforced for hundreds of years until the need arises. How many people obey *every* law of the Traffic Act? The laws or rules are there and can be enforced. The sight of a rare plant or orchid always brings forth the "where did you get it?" query. The loss of amateur status for infringement would prevent the grower from exhibiting in all Societies.

* The trade could still cut their prices and do what they wish. Their best advertisement would be the size and price of the plant compared with their opposition. The resultant levelling of popular orchids would be a natural conclusion to this proposition.

As the lecturer for the evening commences his thankless task of endeavouring to create interest in any orchid other than a cymbidium, the usual fixed stare becomes apparent on the faces of the unbelievers, and although most would not exchange places with him under any circumstances, it seems as though the lecturer does not know of the secret formulae that rude members always convey from the side of their mouths to all and sundry within hearing distance. This causes most enthusiasts in the surrounding area to relieve their feelings by changing their seat

positions without any regard to the lecturer's train of thought being interrupted.

The lecture is completed just before 9.45 p.m. and before he is thanked for his services a few of the disbelievers sneak away out the front door, now that the Treasurer has put his receipt book away, and make for their personal belief, which is a refresher at the local hotel which now is permitted to remain open in Sydney until 10 p.m.

A description of the plants follows the lecture, and this has to be expertly executed lest a member is offended for bad culture of some of his exhibits. An orchid displayed which should be received by the incinerator, is described as a "florist type" of a bloom and thus status quo is preserved.

Prizewinners are announced with the usual remarks against the judges, and the President thanks all for their attendance before he closes the meeting. Within a few minutes committee members are to be seen retrieving the now useless spent matches and cigarette butts so that the sign 'No Smoking' can be thought, by the owners of the hall, to be effective. Tables and chairs are folded up for another month; a meeting is arranged for committee; a venue offered by a new committeeman was rejected because of his recent marriage, on the grounds that as supper formed part of the proceedings his youthful wife was as yet only an "amateur". Perhaps if all orchid growers realised that if an amateur is one who practises any art, study or sport for pleasure *but not for money*, then the champion

orchids of any show should, under present rules, be judged from *all* exhibits in the show.

There does not seem to be many true amateurs after all I have listened to at this meeting, or are other meetings different?

Culturally speaking,

The Editor's Pauwelsii.

• *ORCHID SOCIETY OF N.S.W.*:—To create interest for growers not desiring to transport cymbidium plants to the Sydney Town Hall Festival, two extra classes appear in this year's schedule for cut spikes. One is for metropolitan growers and the other for country enthusiasts.

The Champion and Reserve Champion Cymbidium, as well as the winners of many other Special Prizes, can now be won by any orchid grower, whether professional or not. Naturally the best orchids in the Town Hall will now be awarded whereas previously the champions were not necessarily the best of their genus on exhibit. A six months' rule of ownership applies to prize winning plants.

The "stigma" of professionalism is now not recognised to the extent that the best orchid in the show may be displayed in a Trade Exhibit, and conversely the "amateur" exhibitor does not have to disclose his financial return from orchids before the prize card is written.

The public may now be able to see just what the judges place first out of *all* of the exhibits.

A visit to the Sydney Town Hall during Festival week is surely necessary for all orchid enthusiasts, whether from N.S.W. country enthusiasts or from interstate growers.

ORCHID SOCIETY OF NEW SOUTH WALES

presents

OUR WORLD-WIDE RENOWNED EXOTIC ORCHID FESTIVAL

AUSTRALIA'S MOST SPECTACULAR FLORAL PRESENTATION
IN A TROPICAL PARADISE SETTING

at the

SYDNEY TOWN HALL (MAIN HALL)

TUESDAY, 16th, WEDNESDAY, 17th, THURSDAY, 18th, FRIDAY, 19th SEPTEMBER, 1958

Sections for cut spikes of Cymbidiums for Metropolitan as well as for Country Areas.

District Exhibits, Members' Displays, Decorative Sections.

Also our own Australian Native Orchids on display.

OPEN DAY AND EVENING

ADMISSION 2/6

Appreciating Nature's Freaks

J. N. RENTOUL

• Of all the beautiful orchids that we grow, perhaps the most attractive of them are white—pure snowy white. Their counterparts in humanity are regarded often as abnormal and consequently shunned. They are the mutations known as albinos. For some reason the genes which control colouring have been destroyed or unfortunately misplaced. For our orchids what a fortunate mischance; for our brothers or sisters what a sad mischance.

There is an abundance of white orchids in many genera; but these should not be confused with the albinos, which are distinct from their white or almost white counterparts. In cymbidiums there are varieties of *insigne*, *Parishii* and *eburneum*, that are almost white, and they have variously been given the subsidiary names of "*alba*" or "*virginale*" or some other term signifying white. Generally these are subdivisions of coloured varieties, and are not true albinos.

A true albino is a variant of a species common in any locality. It is normally white, and is so rare that it must be regarded as a mutation from a coloured variety rather than a rare variety in its own right. A notable instance occurs in Australia in the dendrobium *bigibbum* variety *Phalaenopsis*. It is pure white in its albino form, is difficult to find, occurring once in several thousand plants, and always commands a price considerably higher than the coloured variety for this reason.

Another dendrobium rather more common in orchid collections is the *virginale* type of *nobile*. The thought often occurs that this is not a true albino for two reasons—it is a little too plentiful to be regarded as a mutation, and the form of the flower is very different. That proves nothing, but a little in its favour as an albino will be given later on.

ASSOCIATED COLOURS

Of all the orchids regarded as albinos, few fulfil the colour qualification of complete lack of associated colour. Perhaps we may draw the line very rigidly and say that we permit only green as an associated colour, as this, like white, is neutral. It is not an added colour, as even in the coloured forms green is present in exactly the same parts of the flower and in the same intensity.

Liberalising that group will next bring in all the orchids that are albinos with a shade of added colour ranging from green to yellow and covering all tints in between those two. But that must be the barrier. Any colour other than these occurring in rare plants should be given a new generic sub-title. They cease to be albinos.

Other than whites we have a very important mutant group in the lutinos or yellows. Although they must of necessity be brought into what follows, we cannot regard them as albinos, although they will be referred to as such. The most important logical member of this group is perhaps cypripedium *insigne* variety *Sanderdae*.

Orchids such as dendrobium *infundibulum* or *Jamesianum*, which are very liberally spread over certain areas of the earth, should not be confused with true mutations. They are species in their own right and are not found in coloured varieties.

Most of us have seen a white orchid that we would own if we could, and I suppose anyone who has seen dendrobium *bigibbum* variety *candidum*, the albino of the family, has had a hankering to own a plant of it. This is not the only Australian dendrobium albino, but it is the only one that has attracted international attention.

As we travel over the face of the earth we find that most families of orchids have white variants. Some, such as *vanda Sanderiana*, have no known mutations.

But there are allied species that have mutations. Aerides of mostly insignificant varieties are known, but there was once a magnificent plant of *rhynchostylis retusa* variety *alba*, pure white, in a collection in England. I wonder where it is now? *Vanda teres* has an albino form also known as variety *candida*, with a pale lemon-green stain on the labellum. It is larger than *teres* itself, and one of the few white vandas. In the same area of origin occur several mutant phalaenopses besides the white *amabilis*, and it has been suggested at times that these whites are natural hybrids between mutant *Schilleriana* and *amabilis*. To prove that theory is a noble but frightening project. Better let sleeping dogs lie and be satisfied with the magnificent white hybrids produced from them.

The associated colour in these flowers usually is yellow.

WHITE CYPRIPEDIUM ORIGINS

The very large Asian family of cypripediums has variants that perhaps we should refer to as mutants rather than albinos. They are in some cases almost predominately green with white, others white associated with yellow. They are in such variety and are of such importance that we will delineate them all; or perhaps we should say those that assert their characteristics in our present-day hybrids.

Cypripedium *insigne* variety *Sanderae*'s history is so well known that there is no need to repeat it. It is a mutation, but from which species? *Insigne*? And from which variety? *Maulei*? *Sylhetense*? It could well be either. In the last few years in Melbourne, in a large collection of this last variety owned by Mr. G. Leverett, of Moorabbin, among hundreds of plants and thousands of flowers, one stray pushed up its head. Mono-coloured yellow, it was a lutino mutant that flowered truly for the years following. But it was a little smaller than either *Maulei*, *Sylhetense* or *Sanderae*. So that perhaps *Sanderae* was a mutation from a larger variety.

Cypripedium *callosum* had an intriguing story leading up to its discovery, and again Sanders apparently were fortunate to flower an albino form which also took the name *Sanderae*. White and green, with no hint of yellow, it was, if anything, a better mutation than *Sanderae*. From it came cypripedium *Maudiae* and all the other very lovely green and white slippers that grace our collections.

Charlesworthii we usually associate with delicate pink and red shades, but about the beginning of the century there was a variety named *Bromilowiae*, which, like *callosum* var. *Sanderae*, was pure white and green, obviously again a pure mutant albino. Where is it now? And did it leave its impression on present-day cypripediums? We have always had great difficulty in Australia with *Charlesworthii*, so perhaps the albino form, if we ever had it in Australia, has gone where all the good orchids seem to go. Though the species *Spicerianum* must have had a large effect in the white dorsals on modern slippers, there must also be another species responsible in part. Perhaps it was *Charlesworthii* in its albino form or in a very pale variety.

Possibly the greatest use of albino orchids in any breeding lines will be found in cypripediums, and assisting all along the line we find the albino forms of *bellatulum* and *niveum*.

Naturally white in most varieties, these small and very beautiful slippers, also *Godefroyae*, are seldom seen in Australia, proving a little more than difficult.

The Asian neighbour of these three is *Lawrenceanum*, the green and white form of which, *Hyeaenum*, is an albino in colouring, also its other variety *Viride*. But *Lawrenceanum* raises the doubt that all green and white cypripediums should be considered as albino forms. It may be wiser to accept them as naturally occurring green and white species.

Those are the main mutants which enter their appearance in our hybrid cypripediums in the paler than normal shades. Many other mutations go in the opposite direction of darker shades, and are just as popular as albinos. ARE WHITE CATTLEYAS ALBINOS?

Away on the other side of the world we find the cattleya and laelia family profusely spread over Central and South America, and producing an amazing range of white mutations. But the extreme rarity of a pure white with no associated colour seems to have lost out to the very many whites with a yellow to deep orange blotch on the lip or in the throat. What impure whites there are seem to occur in sufficient numbers to warrant their receiving separate varietal names, so that though they may have originated as mutations they have prospered far beyond the initial stage of rarities. In other words, they do not qualify as albinos, though they must enter into what follows. But I feel that we must disregard many of the varietal names; just as cymbidiums and other orchids seem to change markedly when grown in someone else's backyard, and in another State, so a difference in altitude or district has worked the magic of Nature and diversified our species to the degree that we do not recognise them as entities but divide them up into a large family.

The pure albino cattleya has proved unnecessary in our modern world and occurs in the fashion of *lycaste Skinneri* variety *alba*, the most beautiful of the lycastes — a botanical curiosity.

Laelias, the closest relative to cattleyas, could be classed in much the same way, except that they have been cultivated rather for their whiteness than for their usefulness as breeding plants. Here again the lesser associated colour is yellow with white.

Rather than ask the question over and over we had better accept them as mutations on the basis of the paragraph on associated colours. It is very much simpler to follow through on



L.C. SENNORA 'LUSTRE'
(Honorio x C. Juanna)

Brilliant rich colour of this English importation from Charlesworth & Co. is probably the reason for 'Lustre'. Lovely mauve bloom with rich petunia purple lip.



L.C. SARI
(Isabel Sander x L.C. Hertha)

Striking resemblance to parent L.C. Hertha can be seen in this flower. Petals are much broader though the actual width is the same—6 inches—and the shape fuller. Mauve bloom with the lip a rich petunia purple as is seen in L.C. Sennora 'Lustre'.



L.C. HERTHA—A.M.

Although awarded an A.M. in 1950, this flower is still one of our leading show bench orchids. The variety 'Wondabah' owned by Mr. L. Giles was a lovely mauve bloom with a purple lip, and is depicted here to show the present day expectations by the use of L.C. Hertha as a parent which produced L.C. Sari.



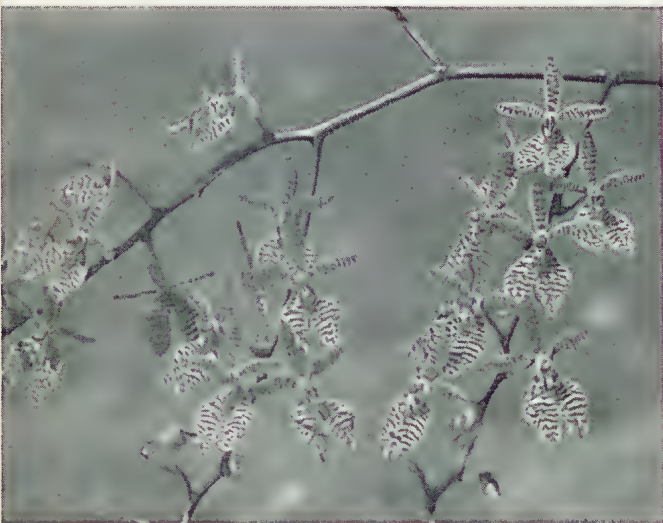
CYMBIDIUM GIRRAHWEEN 'ENID'
—F.C.C.

Not many growers would have grown this one-time scarce orchid to produce this magnificent specimen plant. Owner, Mr. J. Burns was very proud, a couple of years ago, with the effort of eighty-nine flowers.



CYMBIDIUM BRISSIE 'EVELYN'
(Pixie x Lucy)

Winner of many 'Best Coloured Cymbidium of the Show.' This lovely buttercup self yellow flower was photographed in Frank Slattery's Exhibit at the N.S.W. Orchid Festival in 1957.



RENANTHERA BROOKIE CHANDLER
—H.C.C.
(Storei x Monachica)

One of the most attractive orchids seen in Australia for the past few seasons. Bright fire red blooms with orange spots. Plants are grown with Vandas. This plant was owned by Dr. J. Vote.

a common ground if we do so, even if the hypothesis is wrong. Let us accept them as mutations of long standing that have spread and multiplied and even naturally hybridised with other common species, and produced the great numbers of variants of true species.

In the same Central and South American districts occurs another very large family—the odontoglossums. They pose even more unwieldy problems than the cattleyas and laelias. There are so many varieties that it is almost a nightmare to trace the breeding lists out. Some years ago Messrs. Sander, who undertook the registration of all orchid hybrids out of goodness of heart, found it necessary to suspend odontoglossum registrations for a time. However, the *crispum* species have some very beautiful mutations in whites. But most frequently and embarrassingly they seem to produce a colour spot or two which negatives their claims to albinism. Where there is one spot there may be many. Rather than get into deep water with them, and lacking in knowledge, it is best to dump them altogether and leave them out of reckoning in considering albinism.

YELLOW MUTATIONS

Even if we adopt the attitude of disregarding what *could be* albino mutations, we should expect mutations in all orchids . . . mutations either to albinism or melanism, and falling in between these two extremes we find that peculiar group of luteous which exercise quite as definite an influence on hybrids in our collections as do the white mutations.

The most definite luteous or yellow influence occurs in cymbidiums in the form of *Lowianum* variety *concolor*. The very character of cymbidium *Lowianum* precludes a white mutant. It is naturally green to gold with a definite red influence.

The general appearance of *Lowianum* Pitt's variety seems to indicate that it is no other than *concolor*. In normal growing conditions *Lowianum* variety *concolor* is apple green with a lemon coloured band on the labellum instead of red to brown. It also loses the propensity to intensify the red tinge in petals and sepals of its progeny. In other words, it has become depigmented for some reason other than that of environment. It is not rare in orchid establishments, though the natural incidence again would be one in thousands of plants. It is not an albino, but has as much right to recognition as cypripedium *insigne* variety *Sanderæ*, which has much yellow in its make-up.

BREEDING INFLUENCES

The very great influence of these mutations on orchid breeding does not always appear when we look at the flowers and say to one another: "Oh, yes, that is F. C. Puddle, though I have seen it flowered better." Nor does the tremendous amount of thought and work appear even in the best flowers of F. C. Puddle.

In a recent issue of the *English Orchid Review* appeared an article on white cypripediums by Mr. Peter Black, in which he traced the parentage of four very fine white or nearly white cypripediums. He mentioned a visitor from a Commonwealth country (and perhaps we could hang a ticket on some of the possible persons), ". . . who expressed himself uninterested in anything except a large white cypripedium." Mr. Peter Black, in his wide knowledge, could well have expanded his article to a greater length, but he did give four pedigrees of white or almost white cypripediums. In all these four cypripediums, as Mr. Peter Black pointed out, *insigne* variety *Sanderæ* was almost certainly used. (And that it was in association with albino mutants is quite as certain in my mind.) While we have not yet achieved the size of other colours, perhaps because the demand was not there, the bloodlines of these mutant whites could be taken much further. But again the question crops up—where are these particular plants — *bellatulum* variety *Album*, *niveum* and *Godefroyæ*? Are they still in existence? We cannot afford to lose them. We have great collections of *insigne* variety *Sanderæ*, possibly self-crossed seedlings of the original. It is in the true breeding and constancy of the albinos that their greatest attributes emerge.

To quote Mr. Peter Black again, "Cypripedium F. C. Puddle is still the standard by which white cypripediums are judged." There is little doubt that a return to the albino lines will be justified in larger and better whites.

It is a pity that the great strength of the green and white hybrid *Maudiae*, and all the others of the same type, cannot be broken down to the stage where the petals could be shortened and broadened, even if that would be to destroy something that is the very core of their appeal. The combination of *callosum* variety *Sanderæ* and whatever green form of *Lawrencianum* was used (possibly the variety *Viride*) has proved an almost complete lock-out for other bloodlines, and the albino mutant and the possible mutant in *Lawrenceanum* sets a mosaic pattern for almost all mutant breeding. It

seems to consolidate the broken-down genes to a degree where colour has extreme difficulty in breaking through. But a hybrid *Maudiae* x *bellatulum*, or even F. C. Puddle, is a provocative idea.

WHITE DOMINANCE

In the cattleya family, recent years have produced two very outstanding white crosses—Bow Bells and Bob Betts. The key to the last named was a species with all the earmarks of an albino, *Mossiae* var. *Wagneri*—white with a small yellow blotch. In the light of that it is a little hard to discard the hypothesis of white allied with yellow indicating a mutation where it occurs in a variety, even though in numbers it may assume the status of a separate identity. Since all we can do is advance a theory, perhaps we will let it rest there. But strength must be added to that theory when it is realised that all the plants of Bob Betts that have appeared in Australia have been white with a yellow blotch, even if they did vary a little in shape and size. We could have expected at least a few coloured ones from other than an albino line.

Our Australian *dendrobium bigibbum* var. *candidum* has been used to produce other good white dendrobiums, but there is so little data available on the parents used in conjunction with it that no conclusions are possible. Few of its hybrids show improvement on it, however. *Nobile* var. *Virginale* is very dominant, but so far has not produced anything a great deal better.

Among the cymbidiums, the enduring influence of the luteous mutation is evident when we look at such flowers as Esmeralda and President Wilson variety Concolor. But the endurance test is when we take a look at the breeding line of Esmehur (*Esmeralda* x *Golden Mohur*). The flowers of this cross are very much better than *Lowianum* variety *concolor*, but their colour is identical. To get there the influence of *Pauwelsii* had to be overcome. *Esmeralda* x *Golden Mohur* may be taken quite a lot further, but the very strong influence of the original progenitor will prevail. That it was possible for it to early destroy the influence of *grandiflorum* is a measure of its strength, because *grandiflorum* is one of the most forceful bloodlines.

And so, as we take just a quick glance at the orchids which suffered the fortunate mischance of mutation, we find that they lose nothing. They gain much so far as we are concerned in bettering orchids to the pattern we desire, and

it is possible that they have left their mark in the districts where they occurred in producing what we now consider separate varieties of a species. To follow their influence through the last fifty or so years leaves no doubt that they are not weak. They are strong. They are so strong that even when they enter the stage of chromosome multiplication their influence is not affected. It is a great pity that information on their use as alternative pollen or seed parents is not definite, as from that we could take this article to even more boring lengths.

—43 Denman Ave., Glen Iris, Victoria.

• *AN APPRECIATION*:—Australian orchid enthusiasts were shocked to learn of the death of Mr. Wally Fahey, of Waverton, N.S.W.

As an original member of the N.S.W. Orchid Society, Wally was one of the principal instigators of our present Winter Shows. He was a committeeman for many years and was also joint Treasurer.

Mr. Fahey was the "father" of our present day *Cypripedium* growers, including well-known growers Mr. Lou Sasso and Mr. Reg Trenerry, who have to thank Mr. Fahey for their present interest in *Cypripediums*. These plants were Wally's main love, and although he cultivated many other orchids, his main claim as an orchid grower was because of his outstanding success with *Cypripediums*.

Perhaps it is fitting that his memory will be everlasting with the photo of his seedling *Cypripedium Memoria W.* Worth depicted on the front cover of Mr. Fred Moulen's book "Orchids in Australia", which is shortly to be released.

I can remember the race to Melbourne, with Mr. Fahey and Mr. R. Richards in one car, and Mr. Lou Sasso and myself in another, to try and be the first to obtain a rare plant or two from the growers in Victoria. Although neither side was ever victorious enough to gain a few hours' advantage, it was on these twelve-hour dashes that Sydney gained *Cypripedium* Grand Monarch 'Exquisite', our first F.C.C. award for a *Cypripedium*, and *Cymbidium* Ceres 'F. J. Hanbury', which was at that time a sensation for its brilliant red colour.

In later years, although suffering in health, Wally retained his interest in orchids, and although his passing has left a gap in the orchid ranks, his teaching will remain with us for many years.—J. Bisset.

What Is An Orchid?

A Talk Delivered to the Queensland Orchid Society

P. K. SEARLE

• When I first started to think about this talk I recalled an American sergeant whom I met in Townsville soon after the war. He made regular flights to the Solomons and so I started to think about orchids. When I asked him if he had seen any in Guadalcanal he replied, "Orchids? You don't get them in the Solomons—you buy them in New York at ten bucks a time." Since then I have heard many different expressions describing orchids both from the initiated and the uninitiated. The sergeant thought of orchids as the big floppy commercial cattleyas, and many people think they are the only orchids. They only think of the flowers they see in florist shops. Others will tell you of the thousands of orchids they saw in some scrub or other and when you make a few enquiries you find they are talking of elk horns or other tree-growing ferns. Few people except the botanists and the orchid enthusiasts think of the wide range of charm, beauty, interest and strangeness that the orchid family offers to those who go seeking it.

I do not pretend to be a botanist or an orchid expert, but what I hope to do is to describe an orchid plant and its flowers with special reference to those points which I have found it necessary to take into account to assist in successful culture.

First of all, the orchid is a plant. It belongs to the vegetable kingdom and as such any previous experience you have had in the vegetable garden will assist with your orchids. The growing of cabbages has much in common with the growing of orchids.

The orchid belongs to the family Orchideae or Orchidaceae, which is divided into numerous genera each of which is again divided into many species, of which there are in many cases several varieties. This classification is based, as all botanical classification, on the flowers and to the beginner can be very misleading. Very similar plants bear dissimilar flowers. The name is often a descriptive Latin tag, e.g., *phalaenopsis* meaning moth-like, but sometimes is a Latinised form of the name of the discoverer or patron of the discoverer's expedition.

Now, how do we tell an orchid from any other flower? First of all there is the general appearance. Once you have seen a few different

types of orchids there will be in your mind a general picture. When this is analysed we find that it arises from the fact that every orchid flower is made up of three sepals and three petals, one of which is usually more developed than the other two and is known as the lip or labellum. In many cases this labellum is the most distinctive part of the flower and definitely the most attractive. This is probably so as to guide the pollinating insects to the correct entrance to the flower. There are some variations of this general flower form, e.g., in the genus *cypripedium* or *paphiopedilum*, as it is often called these days, the lip has a distinctive pouch form which gave the name Lady's Slipper to one of the species so that this genus is frequently referred to as "Slippers". Also in the same genus the dorsal or back (usually the top) sepal is highly developed to sometimes rival the lip, while the two lateral sepals are fused into one part which forms a background for the slipper.

Bailey, in his *Queensland Flora*, when describing the family Orchideae, commences with the statement "Flowers hermaphrodite", i.e., bi-sexual. This brings us to another feature of the orchid. Many plants have bi-sexual flowers, but in the orchid the stamens and pistil, as other plants have them, are missing and in their place is the column which has the anther carrying the pollen in a protective covering right at the tip, while immediately below is the stigmatic portion, a small sticky depression to which the pollen clings when it has been transported from another flower.

From this brief description I hope you will be able to see that a flower which has six floral parts arranged in two whorls of three (three sepals and three petals) with one part of the inner whorl more highly developed than the other two and the whole enclosing one single column with a little cap on the end and a sticky hollow just behind it will most probably be an orchid flower.

But the recognition of the flowers does not help us to produce them. Let us look at the plant.

The orchid plant is very highly developed and specialised to suit the conditions under which it grows in nature. Most of the genera

and all that are in cultivation have storage organs of some kind. If you look at the plants you will see that they have either fleshy pseudobulbs or large fleshy leaves. The only plants that I have seen without some storage come from the highlands of New Guinea and they are grass-like plants which are adapted for that most favourable climate where they never know want. According to the seasons of their native habitat all the usual types are developed accordingly. You will find the large fat juicy bulbs on those plants which have to stand up to a long dry season, while the large fleshy leaves of the phalaenopses indicate that in nature they are subjected to only moderately dry short spells. From this we get the clue to give the former plants a good rest every year and not to worry about them when it is time to go for a holiday. They can look after themselves. But the others with just a dry woody sort of rhizome and big leaves—well, they do not need the rest nor can they look after themselves for so long.

While on the subject of storage, the orchid is just the opposite to most other plants. The orchid stores its food and moisture in itself, but its seeds contain no plant food whatsoever, while most other plants store a considerable amount of food in the seed and little if any in the plant itself.

This brings us to another characteristic which we must note for successful culture. The orchid family cannot survive alone. It needs the assistance of certain fungi and bacteria for its seedlings to grow—these more primitive forms of life produce food for the seedling until it starts to look after itself, and even then I think it is problematical whether a mature plant is really self-supporting. Although you will find it recommended in many books that the roots of a plant being re-potted should be washed quite clean and all old compost removed, I have found it pays to leave some of the old compost on the roots when the plant is healthy, and I attribute this to the fact that the beneficial fungi and bacteria are carried on into the new compost and the plant does not lose its little mates whose presence makes it happy and healthy. Also I have found that it pays to be careful with sprays, especially fungicides. A good fungicide kills all fungi both good and bad and it is not good policy to kill off the useful ones. In several collections I have seen, the plants are remarkably clean and obviously well cared for with routine sprayings and dipping, and yet the growers do not get the same results in flowers and growths as those

who appear to be less fussy. The comparison is similar to that of the child who is never allowed to go bare-footed and play mud pies with the child who is allowed those things. We all know which is the happier and healthier.

To grow orchids successfully we must look after the roots—so we had better see what they are like. First of all orchids can be divided into two types—the epiphytes, which grow on rocks and trees with their roots practically all exposed to the air (in fact, some of them are true aerial roots), and the terrestrials whose roots are in the ground like those of any other plant. The latter need no further explanation, as given normal conditions they will thrive, but the epiphytes are a different matter. Their roots consist of a thin wiry core surrounded by a thick spongy epidermis known as the velamen. Healthy velamen is usually whitish, especially when wet, and strangely the absence of or a break in the velamen does not indicate a dead root as you will often see a section of bare core with healthy complete root beyond it apparently functioning normally. The velamen is protective and absorptive and it also serves as temporary storage. But if subjected to excess moisture for long periods it dies and rots, eventually rotting the root itself with dire results to the plant. So that we must ensure that the method we use for growing the plant does not subject the roots to the unhealthy conditions to which it is not adapted, we must never try to force a true aerial root into the compost for it will surely die—if it wanted to get out of the air it would have done so by itself.

An interesting thing about the epiphytic roots is their habit of growing. As soon as a root becomes active it develops a green growing tip and the longer the green tip the more active the root. This is a good indicator for the grower to note. Active roots show the plant's ability to absorb water and nutriment; inactive roots normally indicate the time to rest the plant, and, in some circumstances, an unhappy plant which requires a change of some kind.

There are lots of other features of the orchid which could find a place in a talk such as this, but most of them will be included in future talks of this series which will be given by other members. I hope that what little I have said will be of some use to our newer members and that they will come to realise that there can really be nothing definitely laid down as regards orchid culture except a few basic principles which apply to nearly all plants in their

different environments, that the orchid in cultivation is a strange creature which sometimes reacts quite unexpectedly, but which, when treated reasonably intelligently and studied will amply reward its grower with its infinite variety and its captivating beauty.

• *Q.O.S. LIFE MEMBER*:—The Queensland Orchid Society recently honoured one of its foundation members, by making him an honorary life member.

The honour has gone to Mr. Alex Blair, of Toowong, in recognition of his services to the Society during the past twenty-four years.

Mr. Blair is known throughout the Society for his work with Dr. A. Inglis, of Indooroopilly, in orchid hybridization during the past ten years. This programme led to the flowering of *Dendrobium* Lois Bleriot 'Dain', which late last year was awarded an A.M. by the Q.O.S. The plant stood thirty-nine inches above the pot and carried sixty-three open blooms and fourteen buds on six spikes.—P.G.C.

• *SINGAPORE VISITOR*:—Interesting insights into orchid growing and developments in Singapore were given in June to the Queensland Orchid Society by Mr. T. Hale.

Mr. Hale, who is a member of the Malayan Orchid Society, attended the June meeting of the Q.O.S., and in addition to giving a commentary of the *Dendrobiums* and *Vandas* tabled, outlined activities and findings in culture, etc., in Singapore.

One of the interesting points stressed by Mr. Hale is the Rule of Three, practised in plant feeding and pest control.

Under this system, three different fertilisers are used—one of inorganic origin such as Hyponex or Aquasol, and the other two organic such as fish emulsion and steromeal. This results in balanced feeding. In pest control, three different sprays are used in successive applications to prevent resistant strains of pests developing.—P.G.C.

• *MANNING RIVER ORCHID SOCIETY*:—At the July meeting it was decided to hold an Orchid Exhibition on Friday, 12th September (afternoon and night). Mr. W. Redriff, of Tehalba, is expected to bring some plants up for display.

At the meeting coloured slides loaned by Mr. Redriff were shown.

Membership is steadily increasing; amongst those who have joined are Mr. and Mrs. Rothwell. Mr. Rothwell was a former President of the N.S.W. Orchid Society.

• *"ORCHIDS AND THEIR CULTURE"* by Bruce Hogg. (Cassell & Co. Ltd.) 50/-. This book, one of the few written on Australian orchid culture, is to be commended to help meet some of the requirements of orchid enthusiasts.

While many growers might disagree with much which is contained in the book, the knowing ones will agree that in general all new or inexperienced growers will find great value in "Orchids and their Culture" by establishing the proper sequence of thought through which they learned to grow orchids. This is recognised as essentially important for a novice grower.

Though most cultural instruction is excellently presented, especially the final chapter, with a month by month Cultural Calendar, it is only to be expected that these instructions are of great interest and aid to principally Victorian enthusiasts.

Should growers in other climatic regions thoroughly digest the chapters on "Air Conditioning" and "The Futuristic Side of Orchid Growing, Automatic Control", then the object of the author will have been achieved if some enthusiasts commence building air-conditioned glass houses, which are sure to be seen in the very near future.

There is so much information contained in the one hundred and thirty-nine pages of this book that an index will have to be included in future reprints, as the publication is sure to be included in all orchid enthusiasts' libraries both in Australia and overseas.

H.J.L.

• *"THE CHARM AND DIVERSITY OF ORCHIDS"* by M. M. Vacherot. (M. M. Balliere et Fils, Rue Hautfeuille, Paris.) 4,600 francs. Although written in French, "Charme et Diversite des Orchidees" is well worth a place on any orchid bookshelf.

There are sixteen full page illustrations in colour by M. Guy Richard, the like of which we have never as yet been privileged to study in the one publication. For this reason alone the book should appeal to the orchid grower and the artist alike. If some thought was given to the publication of the text in English I am sure many cultural hints could be gained from this modern trend of orchid advertising. The author, M. M. Vacherot, needs no introduction to Australians as his fame with the cultivation of *Miltonias* and *Odontoglossums* has already been lauded by Australian tourists who have visited his nursery in France.—H.J.L.

Winter Show of N.S.W. Orchid Society

FRED JONES

• The Winter Show was held by the Orchid Society of N.S.W. Ltd. at the Y.W.C.A., Liverpool Street, Sydney, on the 3rd June. Despite the optimism of the Committee in charge, the Show did not receive the support that it deserved. Perhaps it was the wet, cold weather, or the unusual season, but it seems that the small grower with his two or three plants to display was not interested. However, the Marshall, Mr. H. Crutch, was able to present a nice display with the plants that were available.

A new innovation was the *Cypripedium* Championship of N.S.W., which carried a beautiful trophy donated by Shepherd & Newman Pty. Ltd. The Championship was eventually won by Mr. R. Mead with Tearlath 'Distinction', a lovely balanced shapely flower.

A group of six cut flowers was brought over from South Australia by Mr. A. McAllan, who was successful in winning the class for *Maudiae* type flowers.

The following notes are the writer's impressions of the prize winning plants, and also the larger of the groups exhibited.

Grand Champion Cypripedium. Tearlath 'Distinction'. Mr. R. Mead. A single large growth with a shapely flower. The dorsal green, marked with brown and edged with white, petals and pouch yellow brown, the ventral green. A well balanced shapely flower with broad segments and excellent shape. Winner of the Shepherd & Newman Trophy, which was admired by all.

Best Green or Yellow Cypripedium. Anita 'Compactum'. Mr. A. Gordon-Gorsky. A strong plant with two smallish shapely flowers. The dorsal clear green with white edging, petals and pouch yellow green, the ventral greenish. A neat and dainty flower.

Best Red or Pink Cypripedium. P. W. Evans. Mr. J. Lawler. A small plant with a large showy flower. The dorsal a rose red shade with white edging, the petals and pouch red brown with the ventral greenish.

Best Specimen Cypripedium. *Venustum*. Mrs. F. Bassett. A lovely specimen of this distinct and dainty little species. A well grown plant carried ten small showy flowers, a blending of green yellow and brown in colour.

Best Maudiae Type. 'Holdenii'. Mr. A. McAllan. A large open flower from South Aus-

tralia. The dorsal white with green striping, the petals and pouch greenish. A bold attractive flower, carried on a tall stem.

Best Other Colour. Snow Bunting. Mr. A. R. Persson. A vigorous plant with a single smallish flower. The dorsal white with a faint yellow green marking at the base, petals and pouch and ventral white with small brownish spots. Fair shape.

Best Group of Cypripediums. Mr. R. Mead. A fine group of eight quality flowers which included the Champion of the Show, and also Penlea—a large shapely flower, Resolute—small but very attractive, Momag—with a reddish pink dorsal, Bonita—a beautiful spotted variety, Radnage—a huge bold flower with reddish spots on the white dorsal, also Firebrand and Fulminster.

Best Display of Orchids and Foliage Plants. Mr. J. Lawler. A large exhibit of orchids and foliage plants, displayed on the stage. A little short of orchids, but a well presented display. Amongst the *Cypripediums* were Lunium—a large, shapely flower, Memphis, P. W. Evans—a rose red dorsal, the huge spotted Matchless 'Balmoral', Lunar, Dervish—green and white, Noblesse—a bright reddish flower, Vale—a huge flower with reddish markings on the white dorsal, and Semitamis—a large bold variety. Other varieties noticed included *Odonoglossum Crispum*, an arching spike of white flowers, *Odonoglossum Nabob* x *Sicard*, white with brownish markings, *Brassocattleya Chanticleer* x *Mimoz*, two small white flowers, B.L.C. Sonia x Mrs. Robert Stone, a lovely pink colour, but having no shape, also *Cymbidium Celia* x *Rusper*, two spikes of showy green flowers. Outstanding foliage plants included *Alocasia Cuprea* and *Sanderiana*, *Philodendrons* Mamei, *Andreanum* and *Gloriosum*, several colourful *Cordylines* and *Crotons*, together with numerous red and orange *Anthuriums*.

Best Cymbidium. Grand Monarch 'Exquisite' Mr. S. Cooke. A strong plant with an arching spike of nine very large open flowers. Petals and sepals yellow green with reddish spots, the large cream lip with red markings.

Best Decorative Cymbidium. *Lutescens* 'Yagoona'. Mr. H. Bawden. A good vigorous

plant carried two arching spikes of showy flowers. Petals and sepals a yellowish shade, the cream lip with red brown spots.

Best Export Cymbidium. Lucy 'Porter's'. Mr. A. Birdsall. A strong arching spike of eighteen flowers. Petals and sepals a good clear green, the lip cream with reddish markings. A lovely spike of this popular variety.

Best Cattleya. Bob Betts 'Bexley' H.C.C. Mr. F. Slattery. A vigorous plant with two large shapely flowers. Petals and sepals pure white, the lip with yellow markings on the throat. Granted a Highly Commended Certificate at the Show.

Best Dendrobium. Lady Constance 'Cosette'. Mr. H. Mills. A small spike of two large rounded flowers and one bud. Petals and sepals an intense reddish purple shade, the lip darker. Excellent shape.

The Best Vanda. Nellie Morley. Mr. H. Burley. A huge plant with a semi-erect spike of eight large bold flowers. Petals and sepals a reddish pink shade with a darker red spotting, the lip red brown.

The Best Phalaenopsis. Chief Awa Ho. Mr. J. Chapman. An arching spike of eleven large shapely flowers just opening. Petals and sepals white, the lip white with red brown markings at the base.

The Best Other Orchid. Oncidium Palmyre. Mrs. K. E. Thompson. An improving plant with an erect spike of nine large flowers. Petals and sepals yellow with brown markings, the large yellow lip having brown markings at the base.

Other groups which contributed to the Show, included the following:

A nicely displayed group by Mrs. K. E. Thompson showed what the smaller grower can achieve with orchids and foliage plants. The more outstanding varieties included *Vanda coerulea*, two plants with large spikes, *Vanda Lester McCoy* x C. S. Fisher, and *Vanda Honolulu*, *Cypripedium Lochinvar*, a bright reddish variety, a specimen plant of *Cappa Magna*, with six large showy flowers, *Mayfair*, *Koritza*, a bright reddish dorsal, the shapely *Mildred Hunter* and *Winslow*. The bright yellow *Oncidium Palmyre* stood out, also *Cymbidium Grand Monarch* 'Exquisite'. The exhibit was arranged with various choice foliage plants and ferns.

Mr. Frank Slattery tabled a nice group of orchids and foliage plants. The *Cypripediums* included a group of the reddish *St. Albans*, *Lohengrin*, white and shapely, the reddish *Perseus*, *Lancaster*, a reddish dorsal with a white

edge, also *Joyce Winifred*. *Cattleya Bob Betts* 'Bexley' H.C.C. made a fine centrepiece and contrasted with *Sophrolaeliocattleya Trizac*, a bright rose mauve shade.

This group was embellished with various *Crotons*, *Cordylines* and *Ferns*.

An excellent group of seven shapely *Slippers* was exhibited by Mr. R. Trenerry, which included *Matchless* 'Marilee', *Mildred Hunter*, a nicely spotted dorsal, *Aldworth*, a large green and brown flower, *Momag*, a reddish pink shade, *Madge le Gros* and the huge *Matchless* 'Balmoral'.

A fine group of sixteen plants was exhibited by Mrs. Hayter. The more outstanding varieties included *Cypripediums* *Thisbe*, a large green and brown flower, the bright *Koritza*, *D. Clarke*, white dorsal with a green base, the shapely *Balaclava*, together with the well-known *Rosemary Waithman* 'Girrahween'.

An interesting group of six excellent *Cypripediums* was exhibited by Mr. A. McAllan, of South Australia. These cut flowers showed excellent culture and created great interest. Included in this group was 'Holdenii', the best *Maudiae* type in the Show, also *Allure* 'Paragon', a neat spotted flower, *Memphis*, the large shapely *Betty Wilson* 'Marvin', together with *Kayantis* 'Savoy'.

This year Mr. L. Sasso brought in a non-competitive exhibit of excellent *Slippers*. Outstanding varieties included the greenish *Brailes* 'The Grange', *Penlea A.M.*, a lovely shapely flower, *Firebrand*, *London Wall*, a large green dorsal with huge spots, the bright reddish pink *Calanthe Revertens*.

One of our oldest supporters Mr. W. Palmer, displayed a nice group. The more outstanding varieties being *Cypripediums* *Severn*, a large green and white flower, *Brailes* 'The Grange', *Diana Broughton*, green and white, *Tearlath*, a white dorsal with a green base and red markings, *Dendrobium Mme. Pompadour*, *Louis Bleriot*, a small seedling of intense colour, and *Brassocattleya Nethersula*, an attractive pink variety.

An interesting display by Mr. A. R. Persson included several plants of *Dendrobium superbiens*, with bright reddish flowers, *Cypripediums* *Ann Barlow*, A.M., R.H.S., two large shapely flowers, the dorsal white with a green base and large brown red spots, petals and pouch red brown, the ventral green, *Snow Bunting*, a shapely white flower, the well-known *Matchless* 'Balmoral', the large showy spotted *Memphis*, also a seedling plant of

Vanda Sanderiana with six smallish shapely flowers.

Mrs. Grace Mitchell staged six early Cymbidiums, which included Wylan 'Sailor Bay', the soft pink, Flamingo, a reddish pink, Duchess, a clear yellow variety of General Montgomery, also Coogee, a yellow with a red lip, and Albania with an erect spike of pink flowers.

A group of some two dozen excellent foliage plants displayed by Mr. John Bisset created great interest with the unusual and distinct characteristics. The Calatheas were very showy and included the following excellent varieties—Picturata, Meddi-Picta, Makoyana and Superba; the Philodendrons were Verrucosum, Gloriosum and Andreanum.

—48 Wareemba St., Abbotsford, N.S.W.

• *THE WESTERN AUSTRALIA ORCHID SOCIETY*:—The Western Australia Orchid Society held its sixth Annual Winter Show in the Perth Town Hall on June 26th and 27th, 1958.

As it was our first competitive show, keener interest was displayed, and the plants and pots received a much better grooming.

Everybody voted the Show a great success, which it undoubtedly was, in every way.

At the beginning our popular President, George Marshall, was wearing a very worried look, but towards the end strutted about with a broad grin, washing his hands in the air.

Indefatigable Hon. Secretary Harold Hill was occasionally stretching his fingers (writer's cramp) after writing, writing and writing—he alone knows what! Just one of those gluttons who likes to do the lot, and does it well. Treasurer Albert Farrart had a wonderful time counting the shekels. Committee members could be noticed gazing round the walls and ceiling, obviously seeking inspiration for new ideas to make the next show much better.

On the first night the ladies in charge of the stall put up the "Sold Out" sign—but an appeal brought a spontaneous rush next morning of Cyp. "Chips", back bulbs and big miscellany from the glass house, bush house and garden, and towards the end the "Sold Out" sign was again displayed.

A new innovation was a display of Cymbidium plants with their spikes well advanced in bud — drawing the public's attention to the galaxy they will see at the Spring Show on the 2nd and 3rd October.

To yours truly the most pleasing feature of the whole business was the way in which all

the competing opponents cordially pumped his arm and congratulated him on gaining the Champion Slipper of the Show and the Caris Bros. Trophy (a beautiful crystal vase), which clearly demonstrated what a wonderful team our one hundred and seventy members are.

Although the crowd came to see orchids, the largest gathering could be seen around the 4ft. x 3ft. decorative displays, which had to contain at least fifty per cent of orchid plants. The space allowed for this class will certainly have to be increased for future shows.

Cymbidiums were conspicuous by their absence, no doubt due to the excessive heat experienced during March and April, which made the season very late. This also applied to Cyripediums. Many of the best not being seen on the show bench.

The results of the Show were as follows:
OPEN SECTION

Cyripedium—*Light Coloured*. A. C. Dawson, 1st and Champion, Windrush.

Cyripedium—*Dark Coloured*. P. Hall, 1st, Tearlath.

Cyripedium—*Any Other Colour*. H. Mercer, 1st, Lady Emily.

Two Cyripediums. H. Mercer, 1st.

Three Cyripediums. H. Mercer, 1st.

Cattleya. A. C. Dawson, 1st.

Dendrobium. H. Mercer, 1st, a beautiful dark coloured seedling.

Any Other Orchid. P. Hall, 1st, a dainty plant of *Oncidium Kaiulani*.

Display of Orchids and Foliage Plants. In a space 4ft. x 3ft. V. Bath, 1st.

The novice section outnumbered the open section by approximately eight to one, and it was very pleasing indeed to see the way in which the newer growers have improved their collections in the last few years.

Everything augers well for our fourth but first competitive Cymbidium Show in October, when we expect to "fill" the Perth Town Hall.
—A. C. Dawson.

• *FRONT COVER* — *Vanda Sanderiana* 'Molly Mills' A.M. 31-3-58. Owned by H. Mills. Flower $3\frac{1}{4}$ inches across petals. Dorsal sepal and petals cobalt violet with red-brown spottings near base. Ventral sepal, cobalt violet heavily overlaid with red-brown tessellation giving effect of olive yellow margins. Labellum a dark olive green. Ventral sepals were $3\frac{1}{2}$ inches across and the petals and sepals were overlaid to give a full rounded effect. Dorsal, sepal and petals lay back slightly and ventral sepals slightly cupped and laying forward. Reg. No. 370.

Orchid Culture in Spring

H. J. LAWLER

• September in Sydney has so many Orchid Festivals and Shows to attract enthusiasts that I am sure that the greater number do not realise that spring has come and with it the preparation of plants for *next year's prize-winning exhibits*.

Most of us are so interested in the new exhibits which demand our attention that we overlook the importance of gaining the longest growing period possible from our plants.

As this cultural "talk" is for the three months of this spring, viz: September, October and November, let us try to prepare our plants not for 1959, but for 1960. A long time—but perhaps the results may prove interesting and also, I hope, beneficial.

CYMBIDIUMS

There is no doubt in my mind that some form of manuring is necessary to grow cymbidiums to the perfection which makes for the show-bench bloom or the *future* export market.

The aim should be to flower the new season's growth and not last year's bulb. This may not be possible with all clones, but modern culture makes for quicker growth if directions published in this Review have been strictly adhered to. It is most important that with a heavy feeding programme the plants must *not* suffer a shortage of water—in fact, they must be damp at all times. Let us try to allow for a short holiday here and there and compromise by using common sense rather than a heavy manuring hand without lots of water. Direction to use three handfuls of manure must vary when the grower is a lady. Hands are so varying in size and texture.

The basic ingredients in our cymbidium compost should have been mixed and ready for use three weeks ago, though it does not really matter. The mix was two buckets of coarse, new tan bark—one bucket of one-year-old tan bark—one bucket of slightly decayed bush leaves—half bucket of fresh poultry manure—three-quarters bucket of coarse crushed sandstone. This mixture, as advocated by Syd Cooke in the June 1957 issue of the A.O.R., can be added to with your own private thoughts on the use of charcoal or additives at your own risk or personal taste. This is our mixture.

As Sydney cymbidiums are ninety-nine per cent bush house grown the plants, after repotting, will need to be shaded for a week or two,

and as the compost was damp when used the plants will not need to be watered for a week unless excessive temperatures are encountered, and then only mist the leaves. Heavy watering will cause the bulbs to shrivel. With a three-bulb plant, a swinger and two bulbs in front, the nucleus of a prize-winning plant is at hand. This plant, and as many other cymbidiums as you may possess, has been potted, with plenty of broken crock, so that it can remain in the *same* pot for two years. Next July, in 1959, we will hose some of the compost from the pot and top off the plant with fresh compost. Plants already in our mixture can be treated this year. In November the plant will receive fowl manure to a depth of half an inch all over the top of the pot and covered with tan bark so that the manure will not cake in the sun. The heavy watering programme should have by this time settled the compost enough so that the fresh manure will give stimulus to the plant. The original manure should have done its work and if fresh aid is not forthcoming our plants will not make up the new growth fast enough to give us the spike for this season.

The fowl manure is obtained fresh and dried out in the sun for three days. It can then be stored in a drum or bin until it is ready to be used. Keep it in a dry shed where the rain will not leech out its food value. There is no odour attached to dry fowl manure, therefore, storage problems should not result. It is most important to keep the plants moist. If the plants become dry damage will be caused to the root system. This reverse osmosis condition is caused by the salts in the compost taking the moisture from the plants, instead of the plants taking moisture and fertiliser from the compost. If you are apt to forget watering then use half the quantity of fowl manure.

In November some extra shade will be added to the top of the bush house ready for the burning summer months. Once each month, at evening, the plants will be sprayed with an all-purpose spray consisting of four teaspoons of E605 (Folidol), for red spider, etc.; four teaspoons of Albarol, for scale; one ounce of Zineb, for fungus diseases; and a tablespoon of detergent to make the "brew" stick on; all mixed in four gallons of water. Tie a piece of cloth over the face and nose, even if you have to guess where the spray finally deposits. A mask is better still

if you do not want to poison yourself. Do not spray on a windy evening and do *not* spray flower buds.

Cymbidium seedlings and back bulbs with leads, grow much faster in the same conditions but with a compost of half the recommended mature plant mix and half peat moss. Thoroughly moisten the peat moss before use. Mix it in a bucket as you would prepare bran for your, by now necessary, back yard fowls.

CATTLEYAS

I do not find any difference in the growth of cattleyas whether fibre or a tan bark mixture is used.

Seedlings from community pots grow much faster if grown with the temperature at sixty-five degrees, in pots with a mixture of one-third each of tan bark, charcoal and crock. The plants in this temperature can be watered nearly every day and fed with two teaspoons of Aqua-sol to one gallon of water every week, both winter and summer. The plants must be watered before the feeding is carried out.

As with the cymbidiums, let us take a cattleya plant of prize-winning expectation and prepare it for 1960. Cattleyas do not like to be disturbed, nor for that matter any orchid. The new roots are just beginning to break through. This is the time to repot. Either use fibre or the mixture as above. This mixture is easier to use and is "open" enough to let us water the plant as we desire.

Cattleyas are best watered when they need it and then let dry out until they need water again. A heavy watering when repotted is enough until the new roots commence to move around the compost. Three bulbs should be enough for the plant to be potted in a receptacle just large enough to keep the plant satisfied for two years. Remember cattleyas are always obliging with their new leads. Either to the left and then right or right then left, but as a rule never the same direction two seasons after each other.

Any liquid fertiliser can be used every second week if your glass house has plenty of light. Plants should be a yellowy green, not a luscious green, for flower production.

Separate your growing plants from the dormant plants. You cannot feed and water all your cattleyas at once. Best plan is to remove the plants as they flower and place them on the end of your bench. A cattleya does best when it has its natural rest before asking it to produce that 1960 prize-winning bloom.

Spray the plants with the recommended cym-

bidium spray at least once a month, but never on a hot day. Choose a dull day or, better still, wait until evening. New growths are susceptible to burn from this spray if the sun heat is strong. In the glass house try to keep the humidity at sixty degrees during the day. Water sprays beneath the benches are most beneficial and better still if they are automatically controlled.

It is impossible to say "I will repot my cattleyas this week-end." Wait until the new roots commence to show at the base of the last growth. Damage these and you set the plant back for many months. Cattleyas in fibre must not be grown wet and when repotting is attempted just remove as much old fibre as possible without disturbing the front section in which the last season's roots are waiting to branch.

If there is a dormant eye at the base of an old bulb, or back cut, place this piece of the plant in a very small pot with the mixture as above and tie it to a stake, as there should not be any roots on the plant, and keep *moist*. Do not let water remain on the dormant eye or the lead when it does commence to grow. The moist compost will create extra humidity and force the eye to "break".

CYPRIPEDIUMS

These plants require more shadier conditions than cattleyas. Plenty of water and humidity is necessary because of their lack of pseudobulbs. Cypripediums grow very well in a mixture of one-third of each of tan bark, fibre and peat moss. Repot the plants during September if you have not done so and use a pot only large enough for two years' growth. Do not break the plants into small pieces. You must have a growth and a lead at least. It is better to cut the old growth away in February next year and leave it in the pot to make a new plant when the next repotting period comes around.

Our show bench plants do not need any manure at this time of the year. Wait until next year. Use our all-purpose E605, Zinib and Albarol spray on a cool day for preventative measures. As a further precaution against fungus diseases, which sometimes develop in certain conditions, I always wrap a piece of fibre around the neck of the plant when repotting.

Many cypripediums can be grown in shady bush house conditions in the Sydney area, and many growers "save" their plants for the September Shows even though they possess glass houses, by not using any heat except on very

cold nights. Temperatures are permitted to drop to fifty degrees with the late blooming their object.

MILTONIAS

The Pansy Orchid was once thought to be very hard to cultivate in N.S.W. Given plenty of fresh air and extra shading in November until March, the plants revel in a mixture of one-third of fibre, oak leaves and tan bark. Very small pots, half-filled with broken crock and watered every day in a glass house, or protected from the elements in a bush house, the miltonias reward us all with flowers during October and November. As soon as is possible after the flowers have been cut from the plant, is repotting time. The new roots are moving and if you just cut away the old compost from the back of the plant it should then go back in the same pot.

Miltonias are easily propagated if cut in the pot in February. The new plant can then be repotted the following year.

Plenty of water is necessary once the plant has settled down after repotting. About two weeks of misting over the leaves and then water every day, bearing in mind that a miltonia in a four-inch pot is *overpotted* unless it is a specimen plant.

It will not be necessary to feed miltonias during the next three months unless the plants have not been repotted. Yearly change of compost seems to suit the Pansy Orchid better than most other orchids.

ODONTOGLOSSUMS

In our climate the odontoglossums and allied genera cannot be classed as *cool* growing orchids. Perhaps they should be grown in a spot in the bush house or glass house where they do not get *hot*. I have seen plants thriving in a bush house in Sydney without any heat in the middle of winter. Conversely, I have seen them thriving in a glass sheltered "hot box" in the middle of summer. The bulbs were red and as hard as nuts, but still thriving.

A glass house which has air louvres, just above the plants, to be opened and closed at will, seems to suit these shade loving plants. Wherever the cypripediums grow in their shadier conditions then so will the odontoglossums revel.

Very small pots must be used. The compost is two-third fibre and one-third oak leaves in pots half-filled with broken crock. Repot as soon as the new roots make their appearance, though it is better with the odont. family that they be repotted in September and October be-

fore the severe heat becomes a daily occurrence. If a plant has to be repotted after this then remove the back section of the fibre or the old compost and pack new fibre, etc., around the plant and place it back in the same pot. Place the plant on the floor of the glass house in complete shade for about two weeks.

Odontoglossums should be *wet* at all times; daily watering is necessary hence the small pots and plenty of broken crock. As their growing season is usually through autumn and winter the best way to grow the plants in our summer is to place the pots inside another pot and pour sand between the pots to create coolness and a resting period for the plant. Misting the leaves during this period is very beneficial.

The pots are much cooler if placed between the spaces in your benches. Air can then travel between the spaces to keep the roots cool and also prevent their rotting should the drainage hole become blocked.

VANDAS

These orchids cannot be overpotted. Best results seem to be achieved with slotted pots or pots with a very large drainage hole. Use a mixture of one-third tan bark (very rough), one-third broken crock and one-third charcoal. During repotting do not bury the aerial roots as you increase the size of the container. These roots will surely die if you do, and then the plant will have no live roots with which to continue its existence.

For the next three months the plants can be grown in a glass house with plenty of light or, believe it or not, a bush house. The plants grow much stronger during our summer under bush house or cymbidium conditions. Water every day and use any commercial fertiliser at *double* the recommended strength every week. Water the plants, then feed them. If you remove the plant for some reason or other then make sure it is placed back on the bench in exactly the same position. If you turn the plant around then severe sunburn will result by the exposure of the leaves which have not been gradually sun burnt.

Vandas grown in a glass house in this recommended compost must also be watered nearly every day from now on, and also be fed each week.

I like the "brew" of E605, Zinib and Aqua-Sol. One teaspoon of E605, one tablespoon of Zinib and four teaspoons of Aqua-Sol to one gallon of water. This spray, if used once a month on vandas, will prevent most troubles and feed the plants at the same time. The use

of a tablespoon of detergent in the spray will make sure that it is there until next application. Use Mum's washing up detergent, though you may have to polish the knives in exchange.

PHALAENOPSES

These orchids are rapidly gaining popularity in Sydney. They are heavy shade lovers and a glass house is necessary where the temperature must *not* drop below sixty degrees. Flowers can be forced by increasing the night temperature to seventy degrees.

The compost and pots, as recommended for vandas, is most desirable, and again the plants must be heavily fertilised. When you feed your vandas then keep going and do the same for your phalaenopses, especially remembering the once a month brew of E605, Zineb and Aquasol.

DENDROBIUMS

Nobile or softwood types all should be in flower during September and October. These orchids prefer glass house conditions in spring and summer and placed in the bush house, to gain many more blooms, during the autumn. About eight weeks before the Orchid Show is to commence the plants should be brought into a heated glass house to force the blooms to open in readiness for the show bench.

Many nobile type dendrobiums are grown all the year in Sydney's bush houses, but flower much later if the above treatment is not carried out.

Fibre is best as a rooting material, and when the new canes are about six inches high a weekly programme of feeding is practised as with vandas and phalaenopses. Water heavily once the new roots commence to push down into the fibre. Hardwood type dendrobiums are quite the reverse. They grow much better if placed in a bush house for the spring and summer and wintered from April onwards in a warm glass house. Fibre is best as a compost material together with small pots. The new growth should be making its appearance at the end of September. Do not give the plant much water until the new growth is well away, and then make sure that water does not lodge in it. The damping off of these new growths does not occur in a bush house because of the prevalence of plenty of fresh air. These orchids also require weekly feeding, and definitely prefer bush house treatment until the end of March.

GENERAL

These hints have been carried out for a period of time and although most are common to the various specialists, an improvement in

just one orchid grower's plants as a result of a hint here and there is always a possibility. Who knows that that hint may be herein contained?

—535 Willarong Rd., Caringbah, N.S.W.

• **ST. GEORGE ORCHID SOCIETY:—** This Society's Winter Show was the most tastefully presented Winter Show in Sydney. The venue was in Hunt Bros. Showrooms at Hurstville, and although a 1958 Ford car was centred in the exhibit, most orchid enthusiasts would not have exchanged their prize winning exhibits for the car, which would not give of its best performance with just some water from the garden hose as an inducement to progress.

As is the case with these modern Orchid Shows, the orchids and foliage plants exhibits were the backbone of the exhibition. The past recognition of foliage plants as embellishment will have to be now changed to suit the modern presentations.

Results were as follows:

Champion Cyripedium of the Show. Balacava 'Beret'—Mrs. S. Hayter.

Best Cyripedium. (a) Red or pink: St. Albans—J. Lawler. (b) Green or yellow: Anita—L. Peaty. (c) Maudiae Type: Maudiae 'Bankhouse'—F. Jones. (d) Specimen: Venus-tum—Mrs. F. Bassett. (e) Any Other Colour: Littledean x Stokes Poges—J. Lawler.

Best Group of Cyripediums. Mrs. S. Hayter.

One Cymbidium. Atlantes 'Bellevue'—S. Cooke.

Best Decorative Cymbidium. Lutescens 'Yagoona'—E. Hayes.

Best Cattleya. C. General Patton—H. Mills.

Best Dendrobium. Anouk—H. Mills.

Best Orchid Not Elsewhere Included. Odon-tioda A. G. Ellwood—J. Lawler.

Display of Orchids and Foliage Plants— Max. 5ft. x 3ft. L. Peaty.

Display of Orchids and Foliage Plants— Min. 6ft. x 4ft. J. Lawler, 1st; H. Crutch, 2nd.

Display of Foliage Plants. M. Jones, 1st; L. Peaty, 2nd.

Best Shoulder Spray. Mrs. E. Menzies, 1st and 2nd.

NOVICE SECTION

Best Cyripedium. Cyp. Unknown — S. Cooke.

Best Coloured Cyripedium. King Arthur—J. Scott.

Best Cymbidium. Grand Monarch 'Exquisite'—A. Bryant.

Best Orchid Not Elsewhere Included. Oncid. Unknown—J. Scott.

• **VICTORIAN ORCHID CLUB WINTER SHOW**:—Held in the Victorian Horticultural Society's Hall, the Show was better than we have had for some years, both in attendance and the number of plants staged. One feature was that the numbers of *Cypripediums* has steadily declined over the last few years, with a corresponding rise in the number of *Cymbidiums* and *Cattleyas*. In the *Cymbidiums* we are seeing more and more Australian crosses, and they make it obvious that the origin of seedlings does not matter at all. Just as many poor ones stem from overseas sources as Australian, and probably the proportion of good ones would be the same.

The *Cypripediums* we looked at were the same good ones we have seen before, a little better or worse flowered than other years. But the outstanding exception was Mr. Hodgins' Bruno x Ballet Girl, which for the sixth successive year was runner-up, this year to Mr. W. Wright, Jr.'s, Alamo 'Warringal'. Fated to be always runner-up seems to indicate that the deficiencies of Bruno x Ballet Girl are more imaginary than real, but to hear the opinions expressed by some of the judges leads one to imagine that their viewpoints need brushing up.

Both flowers were later submitted for award and each gained a Highly Commended Certificate, a matter of a point and a fraction separating them on a full panel's assessment.

A section not so well contested this year was that for the green or yellows. The season is abnormal, but even the flowers produced were inferior to other years in their quality. Some very weak plants were evident, indicating that our *Cypripedium* culture has slipped a bit. There were so many absentees from the competitors' ranks that it became a matter of three or four growers sharing the honours.

In the *Cymbidiums*, Carisbrook 'Bexley' took the pinks and reds section from a very attractive Peri. Another startling colour was Mr. Wright's Reflection 'Warringal'. The light suited it, and on the score of colour it was the reddest *Cymbidium*, its rejection probably being because of its extreme star-shape and narrowness of petals and sepals.

Cym. Swallow 'Soulangeana' was also there; well flowered, too. In the yellows Swallow 'Daffodil', a little early but still well coloured, had a nice spike to take first place.

Cym. Celia x Rusper, Australian-raised green, had no difficulty in winning with a fairly good shaped flower against a collection of mostly muddy Charm 'Elegance' seedlings.

In Australian native orchids Mr. H. Schultz brought a plant of *Dendrobium Speciosum* with some twenty-five spikes of flowers, mostly open, but some still to come. Where he got it at this time of the year is a mystery, but he grows his Australian orchids very well, as his plant of *Cymbidium Canaliculatum* also indicated.

In the section of three orchids there were seven entries, and they were not easy to judge. Where one failed in one genus it picked up on another.

A special section for *Vandas* did not lend encouragement for its inclusion. There were only two entries, and both from the one grower.

A very well flowered plant of *Odontodia Bradshawae* had three spikes of flowers, a flame colour and not large, but probably the plant most commented on at the Show. The grower has struggled with these orchids for years, and it is nice to see a little success come her way. Near it on the bench were several *Laelias*, *Anceps* and *Gouldiana* especially being outstanding.

It's a pity Mr. Leverett was late. He arrived with some plants after the judging was almost completed and had he arrived earlier some of the sparse hair of the judges' heads may have been further reduced as they pondered over what he brought along as against what they had already judged.

It was a good Show for orchids, and what was once the *Cypripedium* Show has now become the Winter Show. Here is the prize list:

Champion Cypripedium. 1st, Alambo 'Lowerstowe'. W. Wright, Jr. 2nd, Bruno x Ballet Girl. Hodgins Orchids.

Collection of Cyps. W. Wright, Jr.

Group of Three Cyps. 1st, W. Wright, Jr. 2nd, J. Allan.

Cyp. Red Shade. 1st, Rositza. J. King. 2nd, Wenbourn, A. Kirkbright.

Cyp. Yellow or Green Shade. 1st, Ansun. A. Kirkbright. 2nd, Radina. J. King.

Cyp. Any Other Shade. 1st, Alamo 'Lowerstowe'. W. Wright, Jr. 2nd, Brita 'Rotunda'. D. Young.

Cyp. Specimen Species. 1st, *insigne*. J. Rentoul. 2nd, *insigne*. A. McMillen.

Cyp. Specimen Hybrid. 1st, Tearlath. W. Wright, Jr. 2nd, Gigas 'Candon Hall'. Jones Bros.

Cyp. Grower of less than thirty Cyps. 1st, Emerald Star. N. O'Sullivan. 2nd, Dervish. N. O'Sullivan.

Cymbid. Pink or Dark Shade. 1st, Carisbrook 'Bexley'. J. Allan. 2nd, Peri. W. Tay-som.

Cymbid. Yellow or Cream Shade. 1st, Swallow 'Daffodil'. Hodgins Orchids. 2nd, Miranda. T. Imrie.

Cymbid. Any other Shade. 1st, Swallow 'Early White'. Hodgins Orchids. 2nd, Atlantis 'Bellevue'. W. Wright, Jnr.

Cymbid. Aust. Raised. Ex. for first time. 1st, Celia x Rusper. Hodgins Orchids. 2nd, Charm x Susette. W. Wright, Jnr.

Cattleya. 1st, C. Michaelmas. Dr. D. Zacharin. 2nd, Lc. Unknown. V. Smith.

Laelia. 1st, *Gouldiana*. V. Smith. 2nd, *Anceps*. V. Smith.

Miscellaneous. 1st, Odont. Bradshawae. Mrs. Tweedie. 2nd, *Lycaste Skinneri*. W. Taysom.

Species Other than Cyp. 1st, *Cymbid.* Unknown. W. Wright Jnr. 2nd, *Coelogyne Cristata*. Capt. & Mrs. C. Cole.

Group of Three Orchids. 1st, W. Wright, Jnr. 2nd, Capt. & Mrs. C. Cole.

Aust. Native Orchid. 1st Dend. *Speciosum*. H. Schultze. 2nd, *Cymbid. Canaliculatum*. H. Schultze.

Vanda. 1st, Honolulu. H. Schultze. 2nd, Gilbert Tribulet x Rothschildiana. H. Schultze.

Novice. Cattleya. 1st, C. Unknown. Dr. A. Nathan. 2nd, Lc. Titimona. Dr. A. Nathan.

Novice. Miscellaneous. 1st, Dend. *Infundibulum*. Dr. A. Nathan.

—J. N. Rentoul, 43 Denman Avenue, Glen Iris, Victoria.

• **PARRAMATTA AND DISTRICT ORCHID SOCIETY:**—A class for the best seedling is an addition this year to the schedule for the Annual Show of the Parramatta and District Orchid Society, which will be held in Grace Bros.' Building, Parramatta, on the 18th, 19th and 20th September.

The late flowering *Cymbidiums* last spring caused a good deal of discussion among members as to the best dates for the Show. The general meeting asked the committee to go through the records and choose the dates on which *Cymbidiums* grown in bush houses were averagely at their flush.

After consulting a large number of growers the committee decided to have the Show a week later than last year.

For the first time in the eight years' life of the Parramatta and District Orchid Society, Mr. A. J. Webb was not in the Chair at the August meeting. The President had been given two months' leave of absence to join a party which will take about four thousand feet of

sixteen millimetre film of Central and Northern Australia. He hopes to show sections of this to the Parramatta Society. The Vice-President, Mr. R. Green, was acting president during his absence.

The Winter Show of the Parramatta and District Orchid Society was held in Grace Bros.' Building on the 7th July, when there was a large attendance. Cash prizes were given in the following classes:

Best Cymbidium. A. West—Charm 'Elegance', very well grown plant of four bulbs and four spikes, two of them fully out.

Best Cyripedium. A. Yee—Brita 'Rotunda', a harmonious composition, with the green bonnet, white-edged, setting off the pink pouch.

Best Cattleya. S. Mills—Remy Cholet—large bloom of good shape richly coloured.

Best Miscellaneous. A. M. Cook—*Lycaste Skinnerii*.

Best Shoulder Spray. Mrs. R. Layman.

• **SUTHERLAND SHIRE ORCHID SOCIETY:**—The official results of our 1958 Winter Show were as follows:
OPEN

Best Group of Cyripediums. First, Mrs. J. S. Bell; second, J. Lawler.

Best Cymbidium. First, Mrs. J. S. Bell, Charm 'Elegance'; second, Dr. C. D. Badham, Charm 'Elegance'.

Best Cyripedium. First, Mrs. J. S. Bell, Cameo 'Wildecourt'; second, Mrs. J. S. Bell, Dervish 'Golden Glory'.

Best Coloured Cyripedium. First, Red, Mrs. C. Gerard, Cappa Magna; second, green-yellow, Mrs. C. Gerard, Ansun.

Best Cattleya. First, H. Mills, General Patton; second, H. Mills, B.L.C. Armida x Goldenthea.

Best Vandaceous. First, H. Mills, Vanda Nellie Morley.

Best Other Orchid. First, J. Chapman, Phal. Chief Awaho.

NOVICE

Best Cyripedium. First, J. W. Taylor, Balclava; second, J. W. Taylor, Mem. W. Worth 'Louise'.

Best Cyripedium for Colour. First, J. W. Taylor, Perseus.

Best Cymbidium. First, C. Gerard, Charm 'Elegance'; second, Mr. Moxey, Madonna 'Melba'.

Best Orchid other than Cyripedium or Cymbidium. First, H. Dore, Dendrobium Jamesianum.

Distant Hills

G. H. SLADE

• At the World Orchid Conference in Honolulu, Dr. de Mendonca, speaking on "Orchid Growing in Brazil", remarked that many indigenous Brazilian species are difficult to grow; yet many Asiatic and Australian species grow so easily, they are often mistaken for Brazilian native species.

This surprising but constantly repeated observation can be interpreted here, for few orchids succeed in the temperate east coast Australian climate like the Brazilian Cattleyas, Laelias, Miltonias and Oncidiums; they grow much more easily than our own Dendrobies, Sarcocochilus and other natives. All seem to succeed on blocks of fibre, or directly on a suitable host tree like the Frangipanni or *Erythrina crista-galli*, provided they are grown out of doors in an airy spot, protected from winds only enough not to endanger the blooms. Of the Cattleyas, *C. Loddigesii* and *C. intermedia* grow well; they become somewhat sunburnt in the clear winter sun, but with the return of leaves on the host plant, their own leaves become darker than ever and they produce fine vigorous growths and bloom freely.

Laelia cinnabarina, *crispa*, *flava*, *harpophylla*, and particularly *Laelia pumila* and *purpurata*, grow freely, producing their colourful flowers over quite a long season, being particularly fine at Easter.

Brazilian Miltonias grow very easily under outdoor conditions; *Miltonia flavescens* loves plenty of sunshine and produces long spikes of showy yellow flowers in October and November; *M. Regnelii* grows strongly on blocks of tree fern fibre producing its charming white and rose flowers on long spikes in March-April. *Miltonia spectabilis* is green in autumn and winter and becomes yellowish just before it flowers. Its flowers are really showy; the normal species is of deep rose colour, the variety *Moreliana* is of vinous purple. Both are very showy and bloom in summer on one-flowered spikes.

The Brazilian Oncidiums make a wonderful collection of plants of varying vegetative aspect and with a diversity of floral form. There are winter, spring, summer and autumn flowering species.

Oncidium flexuosum is very easily grown affixed to a living, more or less vertical stem,

on blocks of fibre. Its small yellow flowers on long spikes are to be found over most of the year.

Oncidium varicosum is a magnificent orchid producing four feet long branched spikes of brilliant yellow "Ballet Girl" flowers in autumn. They are long lasting, looking almost animated in the breeze. They are most showy and are useful for floral bouquets.

Oncidium crispum and *Marshallianum* produce strong branching spikes of flowers with showy petals, sepals and lip; whereas in *O. flexuosum* and *O. varicosum* the lip is the conspicuous part of the flower. Both autumn flowering *crispum* and spring blooming *Marshallianum* are beautiful; each with two four feet long branched spikes of flowers.

Oncidium concolor is a clear canary yellow spring flowering species. *O. longipes* makes up for its short few flowered spikes with the freedom with which it produces them in autumn.

The delightful and colourful *Sophranitis* species grow easily, particularly *S. coccinea* (synonymous with *S. grandiflora*), which produces its scarlet one-flowered spikes in winter making a striking object like a small shapely Cattleya, to which the genus is related.

Sophranitis cernua has smaller rose-red flowers produced in autumn, both succeed with the Brazilian Oncidiums.

These are but a few of the many, for no Brazilian Orchid I have tried from the Sao Paulo area has failed to grow outdoors in Sydney—they make a fascinating group, requiring only a Frangipanni as host tree; they will reward the grower with a continuous source of beauty and interest. All grow more easily than our own native species of Orchids, thus confirming the point of Dr. de Mendonca's remarks.

SOBRALIAS

• Sobralias are among the largest flowered and most colourful of all orchids, yet they are almost disregarded or even maligned probably because of the transient nature of their flowers.

This is understandable in England, where their large size takes too much room in a greenhouse; however, in Eastern Australia they can be grown in a bush house or even outdoors as

a garden plant where space is at no premium. Few of us fail to admire the beauty of an Iris, which compensates for the fleeting beauty of its flowers by their continuous production. This, too, is the flowering habit of the *Sobralia*, which produces from each mature growth a flower every few days during summer to make a colourful and wonderful display in the garden. The blooms last from one to three days; like many short-lived flowers, they have a delicate and indescribable ephemeral beauty that must be seen to be appreciated.

The sepals and petals are large and well shaped of crystalline texture, the large frilled lip being particularly beautiful, which is embellished by its contrasting colour.

Sobralias are rather uniform in vegetative characteristics. They have slender one foot to six-foot reed-like stems with one to two-inch spaced plaited leaves about four inches long. The height depends on the species. They grow in a reasonably protected garden spot in a well-drained rich mixture of leaf mould, manure and sand. They have thick fleshy roots which hold the tufted reedy growths quite rigidly. They like regular watering.

The flowers, somewhat like a large *Cattleya*, are beautifully coloured. In *Sobralia macrantha* they are about seven inches in diameter with sepals and petals of violet purple colour surmounting a large frilled lip with a yellow throat. The stems are four to six feet high. In the variety *S. macrantha* var. *Kienastiana*, the flowers are pure white with a yellow throated labellum, on a rather dwarf plant about eighteen inches high. *Sobralia decora* has rose red flowers, it grows about two feet high, which makes a colourful contrast with *Sobralia leucantha* with its snow white petals and sepals and bright orange yellow, shading through golden yellow to white, frilled lip on a three feet flowering growth. *Sobralia xantholeuca* is similar, but has shapely flowers of sulphur yellow sepals and petals with golden yellow throated labellum; it grows two to three feet high.

The plants of this beautiful genus should be far more popular for they make a spectacular display. In summer a well grown plant is rarely out of flower. They grow and increase generously; especially if they are treated to occasional helpings of liquid fertilisers. Half shade suits them best, especially when they are young or only partially acclimatised. All are natives of South and Central America.—5 Oyama Ave., Manly, N.S.W.

• **THE ORCHID CLUB OF SOUTH AUSTRALIA:**—The second Winter Show held by this club took place in the Royal Society Rooms on the 3rd July, when both exhibitors and members were fortunate in having a mild night after a fortnight of heavy frosts which covered most parts of the State.

The number of plants tabled was not as large as in the previous year, this being partly due to several of our larger growers being interstate. However, a good gathering of members and friends enjoyed the plants which were on show, also the informal chats which followed.

The *Cypripediums*, naturally, dominated the Show, although there was a sprinkling of early *Cymbidiums*, together with a few of the miscellaneous genera. In the group shown by Mr. M. Hill, pride of place went to *Dervish*, a shapely green with two blooms on the one stem. Also exhibited were *Pixie* and *Crimson King* in the red shades, the spotty *Eastlea* and *Cymbidium* *Joan 'Ishtar'*.

A varied and interesting group was arranged by Miss I. Thomas, including *Cyps. Elegance*, *Bromsgrove* and the spotty green *Ave*, *Cymbidium* *Doris*, *Calanthe Veitchii* and *Odontoglossum Hellemense* x *Mary Seville*.

A fine white *Phalaenopsis*, *Margaret Bean*, dominated the *Cypripediums* staged by Mr. W. Harris. Here were seen the well-known green *Ansun*, *Emerald Star*, with a striking white dorsal, *Warrior Green's* variety, *Haroun*, the white *F. C. Puddle* and the species *Purpuratum* which had not been seen in flower before here in South Australia.

A large group brought in by Mr. N. Christoph included the old favourite *Atlantis* 'The Cardinal', *Ballet Girl*, the pale *Grace Darling* 'White Ensign', *Cadland* with five large flowers, *Sweyn*—a white dorsal with a pink blush, and a *Kirksley Pride* with a striking dorsal and a large wine-coloured blush.

Other growers who helped to make the show a success included Mr. J. Smith (*Cymbidium* *Schlegelii* with a fine spike of pink flowers), Mrs. Furner, Mr. White (an enormous specimen plant of *Cypripedium* 'insigne'), Mr. R. Waye (*Cypripediums* *Molca* and *Woodburn*), Rev. Steadman and Mr. J. Langdon.

• Secretaries are urgently reminded that copy for the December issue of the A.O.R. must be received by October 11th, 1958.



SOBRALIA MACRANTHA

*This specimen is growing as a garden plant.
See article by G. H. Slade on page 137.*

ONCIDIUM VARICOSUM

*Notice the active root growth on the underside of the
Frangipanni branches. See article "Distant Hills"
by G. H. Slade.*



MILTONIA PURPLE QUEEN

*(M. spectabilis x M. Clowesii). A hybrid of Brazilian
parents growing on a Frangipanni. See article
"Distant Hills" by G. H. Slade.*





*Mrs. Moir and *Oncidium sphacelatum* in 1957—twenty-one years from one pseudo bulb without dividing. See article this issue.*



*Variegata type *Oncidiums* in *Plumeria* Tree in Hawaii. This culture has been successfully tried with a *Frangipanni* bush as host by Mr. G. H. Slade.*

Oncidiums and Their Allies

W. W. G. MOIR

• Having turned down an article on Dendrobiums because I did not grow them, I was talked into writing something on Oncidiinae instead, hoping to stir up interest in those genera among the Australian orchidists. I believe you all know that the sub-tribe of Oncidiinae belongs under the Vandaeae tribe of the orchid family. However, you will find in literature many arrangements or groupings of the several genera that are closely allied to Oncidiums. In *Die Orchideen* by Schlechter you will find nine groups listed, while *Flora Brasiliensis* by Martins gives the groupings under six headings: A—Notylieae, B—Ionopsideae, C—Adeae, D—Trichopiliae, E—Aspasieae, F—Odontoglosseae.

In these various groups I will discuss but a few genera that are used here at "Lipolani" (Moirs' Garden) for hybridizing. Group A—*Macrodenia brassavolae*; *Notylia barkeri*. Group B—*Trichocentrum tigrinum* and *panamensis*; *Rodriquezia secunda*, *venusta*, *teuscheri* and *fragrans*; and *Comparetia falcata*. Group C—none. Group D—*Trichopilia suavis*, *marginata*, *fragrans*, *tortilis*, *subulata* (also known as *Leuchohyle subulata*) and a couple of unknowns; and *Helcia sanguineolenta*. Group E—*Aspasia epidendroides*, *lunata* and *principissa*. Group F—*Odontoglossum biconiense*, *cariniferum*, *cervantesii*, *cordatum* (3), *crispum*, *grande*, *krameri*, *laeve*, *pendulum* (*citrosimum*), *puchellum*, *rossii*, *schleiperianum* and *uro-skinneri*; *Brassia allenii*, *caudata*, *chloroleuca*, *longissima*, *maculata*, *verrucosa* (*brachiatata*) and *verrucosa grandiflora*; *Miltonia candida*, *clowesii*, *flavescens*, *regnellii*, *rozellii*, *spectabilis*, also var. *lineata* and *moreliana*, and *warcewiczii*, also var. *weltoni* and *panama*; *Oncidium aloisii*, *altissimum*, *ampliatum*, *ampliatum majus*, *ansiferum* (2), *anthocrene* (*powellii*), *barbatum*, *baueri* (2), *bicallosum*, *blanchettii*, *brachyandrum*, *cabagrae purpurea*, *carthaginensis*, *cheiophorum*; *crispum*, *divaricatum*, *ebrachiatum*, *flexuosum*, *guttatum* (both *luridum* and two Mexican varieties), *globuliferum*, *haitiense*, *harrisonianum*, *hastatum* (*stelligerum*), *henekenii*, *hyphaematicum*, *incurvum*, *intermedium*, *kramerianum*, *lanceanum*, *lankesteri*, *leucochilum*, *longifolium*, *macranthum*, *maculatum*, *microchilum*, *micro-pogon*, *montanum*, *oblongatum* (2), *obryzatum*, *ochmatochilum*, *ornithorhyncum*, *pandu-*

riforme, *papilio majus*, *polyadenium*, *pubes*, *pulchellum*, *pusillum* (*iridifolium*), *quadrilobium*, *sphacelatum*, *splendidum*, *sprucei*, *stenotis* (2), *stipitatum*, *stramineum*, *sylvestre*, *teres*, *tetrapetalum*, *tigrinum*, *triquetrum*, *unicorne*, *uniflorum*, *urophyllum*, *varicosum*, *wydlerei* and *wentworthianum*; *Leochilus labiatus*; *Lockhartia oersteadii*; *Sigmatostalix micrantha* and *radicans*.

In the very large genus *Oncidium*, Kranzlin has in Heft 80 of *Das Pflanzenreich* broken down the species into eighteen sections. However, he still had the genus *Cyrtorchilus* separate in that same publication and these are now distributed among the *Odontoglossums* and *Oncidiums*. This is a book well worth having if you can read German and Latin or are an *Oncidium* enthusiast like myself. A reprint has recently been put on the market and can be obtained from most any European scientific book store.

I have secured from Mr. Hermon Slade, of Manly and Homebush, N.S.W., a list of the *Oncidiums* he is growing in the open and notes as to how well they are doing. I will discuss *Oncidiums* and their allies relative to these notes. By the way, much of the pollen used in hybridizing with *Oncidium varicosum*, *concolor*, *marshallianum* and *crispum* have come from Hermon's garden, while many others, such as *forbesii*, *jonesianum*, *lamelligerum*, *gardneri*, *macranthum* and others, have been sent me from several thousand miles away. This is also true of many other genera of orchids. An old candy box carries several hundred kinds of pollen in glassine envelopes on the top shelf of the electric icebox and permits crossing of orchids with widely different flowering times.

The plants that interest me the most are the miniature growing ones with their heavy masses of bloom on spikes up to almost three feet in length. Some of these have very large flowers, while others have masses of smaller flowers, often with a delightful perfume filling the air.

The *Macrodenia*, *Notylia*, *Trichocentrum*, *Rodriquezia*, *Sigmatostalix*, *Leochilus*, *Helcia*, some *Trichopilias*, some *Odontoglossums* and large sections of the *Oncidiums* can be classed as miniatures. However, these have been crossed with the large growing ones and it is remarkable how dominant the smaller plant is

in the offspring. These smaller growing orchids are most colourful and occupy little space. They are quite seasonal in flowering, but with hybridizing a wider period of flowering is being created. Two of these lesser known plants—*Sigmatostalix radicans* and *Rodriquezia secunda*—should be in everybody's collection. They are so easy to grow and produce several sprays of flowers at different periods during the year. *Rodriquezia secunda*, with its pink to crimson red sprays of twenty to thirty tubular flowers, seems to flower all year round; one plant will have four or five sprays open at once and then later another and so on. They seed easily and the seed springs up all over the garden. This is a species mostly found in lowlands of the tropics, but has a very wide adaptability to wet or dry conditions and to heat and cold.

The small *Odontoglossum krameri*, with its spray of three to six flowers of lavender blue and heavy texture, flowers in December and January. The *Trichopilia subulata*, with its dozens of sprays, a few inches long with very pale pink flowers about an inch across, cascading from a terete leaved base, are like a miniature wedding bouquet. The *Odontoglossum pulchellum* with its numerous sprays of white flowers like a large lily of the valley and with a delightful aroma are also quite a sight. These species should do well in Sydney and probably as far north as Cairns. They are not easily obtained, even when one goes to the jungle for them, while the *Rodriquezia* can be found by the truckload in Panama.

The other *Rodriquezias* mentioned above, *venusta*, *fragrans* and *teuscheri*, are larger flowers than *secunda* and are a bit more seasonal. Several crosses with *Brassias*, *Oncidiums* and *Miltonias* will probably be more useful. Someone is bound to raise the question as to whether *venusta* and *fragrans* are synonymous. Normally they are supposed to be but the two forms used at Lipolani are very different. I am awaiting word from Dr. Garay, through Mr. Henry Teuscher, of Montreal, as to what each really is after the plants I sent them flower. The delightful newly found *teuscheri*, named after the Director of the Montreal Botanical Garden, is really a treat to look at.

Comparetia falcata with its rich pink flowers with a long spur on spikes three to four feet long should add much in the way of colour. The seedlings of a cross of this species with *Rodriquezia secunda* have flowered with but two leaves on the seedling. These characteristics of flowering early from seed belong to both

parents. The cross mentioned was made in December, 1955. It is a deep crimson colour.

The *Trichopilias* are a larger flowered group of plants, but rather compact and small in growth. *T. suavis* is by far the most striking as to beauty and numbers of flowers to a spray. These flowers are three to five inches across with tubular throat spotted in shades of pink. The finest variety of this ever seen was in the garden of Mr. C. H. Lankester in Costa Rica and the plant is now supposed to be in England at David Sander's place. It had a deep pink throat on unusually large flowers. *T. fragrans* is like *T. suavis* in flowering habits, but is not as large. The other *Trichopilias*—*marginata*, *tortilis* and one or so others—are single flower species, that is, many flowers have come out from the base of each new growth, but all are on single stems. These have twisted and curled sepals and petals. *T. marginata* varies considerably and if you should get the very large flowered (seven inches) deep red tubular throat variety, you will really have a jewel. These *Trichopilias* are easy to cross with *Miltonias*, *Brassias* and *Oncidiums*, but are not very easy to grow in the community pot stage. They do come along later if they pass that difficult age.

Aspasia is a genus that has not received its rightful spot in the limelight. It seems to be a connecting link in hybridizing for it is easy to cross them with *Miltonias*, *Oncidiums*, *Brassias* and others. The first bigeneric has just been named and sent to Sanders for registration as *Aspasia Regal*. This is a cross between *A. epidendroides* and *Oncidium wyddleri*. Again, here is a genera that brings the ten to twenty-foot long spikes of some *Oncidiums* down to a couple of feet in the offspring. *A. principissa*, which is sometimes called a variety of *epidendroides*, but is completely different, makes an excellent parent. It has flatter, more beautiful and long lasting flowers.

Of the warmer *Odontoglossums* that can be easily grown even as far north as central Queensland, *pendulum*, *puchellum*, *cordatum*, *laeve* and *bictoniense* should be tried. In this same area *cervantesii*, *rossii* and *uro-skinneri* may also succeed. The first two of these three are smaller growing plants and, like *krameri*, are very colourful. However, *grande*, *crispum* and *schleiperianum* should definitely succeed in N.S.W. along with the many hybrids of the *crispum*, *pescatorea* and *harryanum* types. Crosses of these *Odontoglossums* with *Oncidiums* and *Miltonias* from warmer areas are now growing nicely in community pots. A Brazilian *Oncid*—

blanchettii—has been used extensively in crossing while a Mexican one — *oblongatum* — has also been brought into the picture. These Oncids are very colourful, pure yellow flowers with large labellums on long spikes that branch near the end. Since *Oncidium varicosum* is rather difficult to flower and maintain here and *Oncidium tigrinum* is also a problem, I have had to use the two mentioned above to get large flowers. The two I cannot grow well should do well in Sydney. They are probably the finest next to *macranthum* and the hybrid *Onc. x Matador (varicosum x tigrinum)*. *Odontoglossum cordatum* comes in many colours from red brown through green yellow to pure yellow. It is a rather easy plant to grow and its seedlings have great vigour.

The Brassia are a group of larger growing plants with pseudo-bulbs the size of grapefruit. The easiest and least troublesome to grow is *B. gireondiana* from Panama. It is fast being removed from the forests of Panama by orchidists. In three visits over five years time, we have found it further and further away from civilization. That is a shame, for it should be easier to raise seedlings from excellent parents than to have this destruction of nature's beauty. One specimen I have used continuously for crosses has flowers that measure seventeen inches from tip to tip of the petals (up and down) and ten inches across. There are from twelve to eighteen flowers on a spike. *B. maculata* from Jamaica is the most showy Brassia for it has a broad white labellum, well spotted and its sepals and petals, while not long, are broader and showier. *B. caudata*, with its various forms from many countries, like *maculata*, is a bit harder to grow since both of these are quite susceptible to virus and bacterial problems. *B. longissima* and *B. chloroleuca* have flowers almost alike and come from the same countries, but in Costa Rica and Panama one occurs mostly on the Pacific side (*chloroleuca*), while the other is on the Atlantic side (*longissima*). *Chloroleuca* has two leaves on the end of the bulb and *longissima* one.

B. Allenii from Panama is quite different since it has no pseudo-bulb. It flowers out of each leaf axil on both sides up to the last leaf, then makes a new growth. It is a species very susceptible to virus diseases. We shall see how the hybrids from it will react. They are very vigorous growers.

A striking bigeneric is Brassidium and more and more of them are coming on the market.

Brassidium Betty Shiraki is wonderful, but be sure you get the type that flowers.

Miltonias of both the Colombian and Brazilian types should do well in all parts of Australia. The latter type in the warmer areas and the other in the cooler. The Brazilian hybrids are even doing very well at Manly, according to Mr. Hermon Slade. Innumerable new hybrids of all these and between the two types are available, plus the most interesting use of all these with Oncidiums, Odontoglossums, Brassias and Aspasias. *Miltonia spectabilis* and its many varieties give excellent size of flower themselves, and in their hybrids, but unless crossed with many flowered varieties their single flower character will reduce the number of flowers in the offspring to one or two.

Miltonia roezilii is probably one of the most useful parents to bring the two types together. We found, in the Darien Province of Panama at low altitudes, an excellent flowering strain. *Miltonia warscewiczii*, with the varieties *Wiltoni* and *Panama*, is a great asset to hybridizing for it gives excellent display of flowers on the spike, an interesting labellum with bright colours. The various varieties of this species give different characters to the offspring. The other Brazilian species, many of which may have been natural hybrids, are colourful in the garden. *Clowesii* and *russellianum* are dark browns and difficult to separate; *candida* is most distinctive with its tubular labellum; *flavescens* with its Brassia-like flowers; *regnellii* with its squarish labellum, which is most dominant in hybridizing, and a plant we call *stellata*, which gives numbers of flowers of large size. This *stellata* cannot be the supposed var. of *flavescens* for it has little about it like *flavescens*. It might be a natural hybrid of *spectabilis*, for its flower is almost the size of *spectabilis* but has an all-over one colour of medium lavender. It is such a willing seed producer, which makes it questionable that it could be a hybrid.

Striking bigeneric crosses of Miltonias and Oncidiums are available. Probably the finest so far is *Miltonidium x Lee Hirsch (M. spectabilis var. moreliana x Onc. varicosum Rogersii)*. The cross of *Miltonia warscewiczii Wiltoni* and *Oncidium anthocrene (powellii)* has produced a very colourful vigorous medium length flower spike.

Now, for a discussion of the Oncids which will have to be broken up into sections just as Kranzlin has done in his monograph. He divi-

ded them into eighteen sections and some are sub-divided.

Section 1—*Teretifolia*

These have round leaves or terete in form and rather difficult to grow except under dry hot conditions. They are very susceptible to a blackspotting problem. However, *O. jonesianum* and *sprucei* from Southern Brazil and Uruguay might do well with Sydney conditions, while *ceboletta*, *teres*, *stipitatum*, *ebrachiatum* and *longifolium* might do further north in Queensland. They must be grown dry.

Section 2—*Aphanobulbia*

Kranzlin sub-divides this section into three: A—Iridifolia, B—Variegata and C—Miltoniastrum.

In the sub-section A are two excellent species, *pusillum* and *pumilio*, which love shade and sunshine respectively. Recent letters from Mr. Calaway Dodson in Ecuador, who is collecting and studying orchids there, casts some doubt on the species *glossomystax* being a species. He feels strongly that it might be a hybrid between *pusillum* and *pumilio* for it only occurs where the other two occur. It, however, has greater vigour than both parents. It should be difficult to grow these Oncids in Australia unless on trees or shrubs. They love guava trees in Ecuador.

Sub-section B—Variegata—has been the group I have done most hybridizing with. I feel they have crossed in nature and back-crossed till today one has difficulty in distinguishing what is the true species form for some of them like *tetrapetalum* or *quadrilobium*. However, *triquetrum*, *intermedium*, *urophyllum*, *pulchellum*, *haitiense* and *henekenii* are easy to distinguish, while *variegatum*, *sylvestre*, *berenice*, *leiboldii*, *tuerckheimii* and *tetrapetalum* are easily mixed with each other in some cases and between the true species and the natural hybrids in the other. The dominance in hybridizing of some of these variegata species for certain characteristics is most interesting. An article on these alone would take many pages. I am committed to collaborate with Mr. Dodson in writing these up.

Probably the most beautiful of the species is *pulchellum* with its crimson pink flowers (one and one-half inches) on branching sprays two to three feet long from plants not more than six inches high that are bronze red-green in colour. *Haitiense* is probably the next most striking with its foot and a half long branching spikes of deep yellow flowers (one inch) from still smaller plants of dark olive green

spotted all over with maroon. This *haitiense* has a flower very much like *intermedium* in colour and shape, however, the latter has rounder fuller flowers of far less number. *Triquetrum*, with its heart-shaped or spade-shaped labellum of red and tan flowers on a short spike, is the parent to use for making compact plants with shorter sprays and many flowers in a compact mass. Such hybrids as Helen Brown, Agnes Ann and Golden Glow are delightful bouquets when a small potful is all in bloom.

Pulchellum hybrids always give full rounded and frilled labellums and when combined with *sylvestre*, with its frilly full labellum, one comes up with the most beautiful frilly labellum in pink of hybrid Anna Rosa.

Urophyllum is placed in this pseudo-bulbless group, but does have a small pseudo-bulb. It is most dominant in its yellow colouring as found in hybrids Michael Hart, Erma Warne and Golden Glow.

Sylvestre and *variegatum*, each with variety forms, are not easily distinguished at first, but when once one knows the difference they can be readily separated. They react differently in hybridizing.*

These "Varietata" oncidids are a real treat and are simple to grow on bushes as they hate to have their roots covered. They will grow in pots but much easier tied on to a tree with a little fibre to start with and then watered often till established. (Crescentia, plumeria and Calliandra trees.)

* Since writing this I have found that what I have been grouping together under each may be other species such as *berenice* or *leiboldii*.

(Continued Dec. issue)

—P.O. Box 2298, Honolulu, T.H.

• This issue publishes most of our Australian Winter Show results. Newcastle and North Shore, will appear next issue due to copy arriving too late for publication.

• **TASMANIAN ORCHID SOCIETY:**—"Mrs. D. W. Hardie, wife of the President of Ku-ring-gai Orchid Society, recently paid us a visit in Tasmania. As her stay was so brief it was impossible for her to visit an open meeting. However, she was entertained at the secretary's seaside cottage, where she met committee members and their wives and husbands. Mrs. Hardie gave a happy, informal chat on the conditions prevailing in Sydney at present. We hope she comes back again."

• **SPRING SHOWS:—**

Eastern Suburbs Orchid Society.—29th and 30th August.

Mosman Home Gardeners' Association.—Mosman Town Hall, 5th and 6th September.

St. George Orchid Society.—Regent Hall, Hurstville, 8th, 9th and 10th September.

North Shore Orchid Society.—Chatswood Town Hall, 11th, 12th and 13th September.

Illawarra District Orchid Society.—Pioneer Hall, Church Street, Wollongong, 12th and 13th September.

Manly Orchid Circle.—12th and 13th September.

Northern Rivers Orchid Society.—Richmond Hall, Richmond, 12th and 13th September.

Orchid Society of N.S.W. Ltd.—Sydney Town Hall, 16th, 17th, 18th and 19th September.

Newcastle Orchid Society.—City Hall, 17th, 18th, 19th and 20th September.

Parramatta and District Orchid Society.—Grace Bros. Building, Parramatta, 18th, 19th and 20th September.

Gosford and District Orchid Society.—18th, 19th and 20th September.

South Coast Orchid Society.—Community Hall, Prince's Highway, Corrimal, 18th, 19th and 20th September.

East Hills and District Horticultural and Orchid Society.—20th September.

Shoalhaven Orchid Society.—R.S.L. Hall, Junction Street, Nowra, 21st and 22nd September.

The Orchid Club of South Australia.—Liberal Club Hall, 22nd, 23rd and 24th September.

Commonwealth Bank Orchid Society.—C.B.A. cnr. Martin Place and Pitt Street, Sydney, 23rd September.

Eastwood and District Orchid Circle.—Masonic Hall, Rowe Street, Eastwood, 26th and 27th September.

Western Suburbs Orchid Society.—26th and 27th September.

Maitland Orchid Society.—Town Hall, 26th and 27th September.

Camden Orchid Society.—R.S.L. Hall, Oxley Street, Camden, 27th September.

Sutherland Shire Orchid Society.—Kindergarten Hall, Karimbla Road, Miranda, 27th September.

Belmont-Swansea District Orchid Society.—R.S.L. Hall, Swansea, 3rd and 4th October.

Blue Mountains and District Orchid Society.—Warrimoo Citizens' Hall, Great Western

Highway, 10th and 11th October.

Sydney Orchid Society.—R.S.L. Hall, Campsie, 10th and 11th October.

• **SHOALHAVEN ORCHID SOCIETY:—**

The third Annual General Meeting of the Shoalhaven Orchid Society held at the Fire Station, Junction St., Nowra, 14th April, 1958, proved that orchids in this new and southern area are a great success.

A small attendance of members was treated to a very interesting report from the President (Mr. D. O'Brien) on the activities of the Society over a most successful year. The progress of the Society is indicated by an increase in active members, financial balance and a very successful show that was equal to the best Sydney suburban show and was by far the best in the southern area. The popular vote competition held each month during 1957-58 was won by Mr. A. J. Morison, 47 points; 2nd, J. Apperley and D. O'Brien, 19 points each; 3rd, Mrs. Rodway, 17 points.

Office bearers elected for 1958-59 are as follows:

Patroness, Mrs. N. Rodway, O.B.E.; Patron, Mr. R. W. Hall; President, Mr. D. O'Brien, Shoalhaven St., Nowra; Vice-President, Mr. P. Ryan; Secretary, Mr. A. J. Morison, Junction St., Nowra; Treasurer, Mr. J. Apperley, Shoalhaven St., Nowra; Publicity Officer, Mr. John Morison, Pyree, via Nowra.

THE VICTORIAN ORCHID CLUB

presents

GIGANTIC
ORCHID EXHIBITION

at the

PRESTON MOTORS SHOW
ROOMS

104 Russell Street, MELBOURNE

Tuesday, 7th Oct. to Saturday, 11th Oct.
10 a.m. to 10 p.m. daily.

IN AID OF THE VICTORIAN CANCER
APPEAL

President:
G. McCraith
106 Roberts St.
Essendon
Phone: FX3570

Hon. Secretary:
Mr. Jack McArthur,
24 Somerset Road,
GLEN IRIS, S.E.6
Phone BX1314

New Orchid Hybrids[†]

NAME	PARENTAGE	FLOWERED BY
<i>December, 1957—Continued.</i>		
" Janie D. Fuller	C. Admiration x Maginot	Mary M. Fuller Orchids (Fields Orchids)
" Kathleen Jeal	Bacchante x Lustre	W. J. Jeal
" Mem. Joseph Ozzella	Bacchante x Dorothy Fried	" "
" Perigord	Musset x Leviathan	P.F.F. Vacherot & Lecoufle
" Reflection	C. Molly x Lustre	W. J. Jeal
" Wilkis	Helen Wilmer x Kismet	Rivermont Orchids
Miltonia Alderwood	Solfatari x Talisman	Gordon M. Hoyt
" Maiden's Blush	? x ?	Sanders
Odontoglossum Royal Ballet	crispum x Opheon	Charlesworth & Co.
" Wilville	Wilckeanum x Mary Seville	Mansell & Hatcher
Oncidium Barbara Metzger	lanceanum x sphacelatum	Fred Metzger (Lager & Hurrell)
Phalaenopsis Dolores	Chief Tucker x Mem. Nasu Tomo- guchi	Shaffer's Tropical Gdns.
Potinara Dark Eyes	Lc. Mirabelle x Potinara Medea	Theodore T. Zuck (R. H. Gore)
Vanda Prince Kan	Mevr. L. Velthuis x Tatzeri	Masaya Miyao (Masatoki Tanouye)

Correction to March List, 1939:

Miltonia Kilder (Bruges x Mem. Frederick Sander) Clive Cookson, should read Milt. Keilder etc.

Correction to February List, 1949:

Miltonia Louisa (Crowborough x Sybilla) Low, for Milt. Louisa read Milt. Asa.

Correction to April List, 1955:

The name of Lc. Betty von Paulsen (C. trianae x Aeneid) Alberts & Merkel, is to be withdrawn in favour of Lc. Trineid.

Correction to January List, 1957:

Cancel Bc. Marion Dykes, etc.

Correction to March List:

Aranthers Anne Black and Bloodshot (Singapore Bot. Gdns.), delete Dr. K. L. Mah.

January, 1958

Brassocattleya Chief Logan	C. Titriane x Francis Burt	O. M. Tucker
" Deep Purple	Hene x C. Dorothy Tucker	" "
" Freddy Foreman	C. Enid x Coronis	" "
" Kairos	Cliftonii x C. Titriane	" "
" Kinnikinic	Coronis x C. Jocasta	" "
" Kiri	C. Jocasta x Francis Burt	" "
" Ohio	Francis Burt x C. Helen Tucker	" "
" Pink Lilac	Coronis x C. Edithiae	" "
" Pink Passion	C. Edithiae x Cliftonii	" "
" R. O. Thomas	C. Edithiae x Deep Purple	" "
" Saturn	C. R. Cadwalader x Vilmoriniana	" "
" Ticonderoga	C. trianae x Francis Burt	" "
Brassolaeliocattleya Arcole	Lc. Leviathan x Bc. Everest	P.F.F. Vacherot & Lecoufle
" Cecile Wagner	Lc. Cameronian x Bc. Peetersiae	Mrs. Cecile Wagner
" Maude Montgomery	Truffautiana x C. dowiana	Dr. E. M. McPeak
" Noreen De Santis	Lc. Asbery x Bc. Deep Purple	O. M. Tucker
" Princess Louisa	J. K. Lilly x Lc. Elizabeth Lind	Beall Greenhouse Co.
" Inlet	Lc. Asbery x Bc. Francis Burt	O. M. Tucker
" Schamir	C. bicolor x Midas	Rod McLellan Co.
" Sutters Fort	Titriane x Corydon	O. M. Tucker
Cattleya Aenemia	Edithiae x Jocasta	" "
" April	Easter Halo x Trimos	" "
" April Halo	Titriane x Katadin	" "
" Buckeye		

Name	Parentage	Flowered by
Cattleya Columbus	Titrianæ x R. Cadwalader	O. M. Tucker.
" Dimmydale	Edithiæ x Heritage	" "
" Easter Halo	Jocasta x Trimos	" "
" Hedwig Thomas	Helen Tucker x Polonaise	" "
" Heritage	Adorno x Edithiæ	" "
" Isabel P. Weeks	Mount Ranier x Clementine Goldfarb	Miss Josephine Weeks
" Jimmy Foreman	Leda x Titrianæ	O. M. Tucker
" Joan Waddell	Bow Bells x Nathalie Dekens	A. Waddell (De Jong)
" Mary Lincoln	George Rabe x Titrianæ	O. M. Tucker
" M. G. Woodhull	Enid x Titrianæ	" "
" Pale One	Titrianæ x Jocasta	" "
" Polonaise	Sylvia x Ballaurea	" "
" Rio Claro	Julio Conceicao x mossiæ	Warwick E. Kerr
" Rose M. Baker	Mrs. Frederick Knollys x Ardmore	H. Patterson & Sons
" Starlight	Cybele x Trimos	O. M. Tucker
" Tamaqua	Triclotho x trianæ	" "
" Terrie Tucker	percivaliana x Titrianæ	" "
" Wyandotte	Helen Tucker x Ingenieur Reybaud	" "
Cymbidium Bodega Head	Atlantes x Studley	Rod McLellan Co. (E. W. McLellan)
" Christmas Valley	Sanrita x Midlothian	Beall Greenhouse Co.
" Duxbury Point	Princess Elizabeth x lowio-grandiflorum	Rod McLellan Co. (E. W. McLellan)
" Holly Meadows	Elaine Miles x Mirella	Beall Greenhouse Co.
" Ian Stewart	Claudona x Alexanderi	F. A. Stewart Inc.
" Wardette	Warbler x Claudette	Stuart Low
Cypripedium Abrantes	San Actæus x Banchory	P.F.F. Vacherot & Lecouffe
" Aliescum	Floralies x Cullum	I. M. Sieff
" Amina	Ann Harper x Orientum	Dr. W. Stirling
" Beaudalla	Beaute x Dalla	I. M. Sieff
" Chandler Junior	Great Mogul x Regent	Sanders
" Crowborough Treasure	Shearwater x Lady Jane	Stuart Low
" Edith-Elizabeth	Handin x Marguerite Jensen	Dr. W. Stirling (Keeling)
" Floriote	Patriote Serreyn x Florence Smart	Dr. W. Stirling
" Frank J. Ross	Cameo x Clementine H. Churchill	Everett V. Dulin (F. Cosanka)
" Graceful Wren	Graceful x Golden Wren	Sanders
" Memoria Joe Ozzella	Rosy Dawn x F. C. Puddle	Mrs. Marie Ozzella (Joe Ozzella)
" Naumi	Mem. J. H. Walker x Leonora	Stuart Low
" Rainbow Run	Diego Usted x Banchory	Dr. W. Stirling
" Restdale	Resolute x Allendale	I. M. Sieff
" Rose Beau	Beaute x Blagrose	" "
" Sally Ann Dulin	Hellas x Atlantis	Everett V. Dulin (E. C. Wilcox)
" Venice	Alistair MacIan x Gondolier	Dr. W. Stirling (Jensen)
Dendrobium Barnabas	Tumphal x undulatum	Khoe May Seng
" Chiqueta	Charm Devi x schroderianum	" " "
" Delilah	Tumphal x veratrifolium	" " "
" Dorcas	Collin Potter x veratrifolium	" " "
" Esther	Chiqueta x Orchidwood	" " "
" Hana	Tumphal x goldiei	" " "
" Janice	Austinii x G. V. Llewellyn	Stuart Low
" Khoo Boo Hin	Louisæ x schulleri	Ng Peng Wah & Tan Aun Phaik (Wm. Kirch)
" Lee Kok Hooi	Dana x Lester McCoy	Lee Ewe Boon
" Mary	Tumphal x bigibbum	Khoe May Seng
" Orlando	Ruth Thomas x Orchidwood	C. W. DuBois
" Rachel	Chiqueta x schroderianum	Khoe May Seng
" Rebecca	Tumphal x schroderianum	" " "
" Sarah	Chiqueta x veratrifolium	" " "
" Simson	Tumphal x Louis Bleriot	" " "
" Solomon	Chiqueta x undulatum	" " "
" Zilpa	Louis Bleriot x violaceoflavens	" " "

Name		Parentage	Flowered by
Laeliocattleya	Aneuploid	C. Titrianæ x Ishtar	O. M. Tucker
"	Burlingame	Aeneid x Snowdrift	Rod McLellan Co. (E. W. McLellan)
"	Captain Hook	C. labiata x Buccaneer	O. M. Tucker "
"	Copper	C. Maggie Raphael x Pyramus	Beall Greenhouse Co.
"	Destruction Island	Allison II x Bou Philippos	Rod McLellan Co. (E. W. McLellan)
"	Emily Montgomery	C. Tellus x Mary Rose	Beall Greenhouse Co.
"	Lake Quinault	C. Winter Gleam x Elizabeth Lind	O. M. Tucker
"	Levonía Fraley	Mme. Brasseur Hye x C. Corydon	Rod McLellan Co. (E. W. McLellan)
"	May Fleishhacker	Bacchante x Cuesta	" " "
"	Oakland	Buccaneer x Mary Rose	" " "
"	Phyllis Tucker	C. loddigesii x Governor Gore	Beall Greenhouse Co.
"	Ripple Rock	Elizabeth Lind x George MacDonell	O. M. Tucker
"	Red Herring	Schuylkill x Charles Futterman	" "
"	Rybat	Locarno x C. Titrianæ	Rod McLellan Co. (E. W. McLellan)
"	Sacramento	C. Prospector x Mary Rose	O. M. Tucker
"	Schuylkill	C. percivaliana x Hilary	Rod McLellan Co. (E. W. McLellan)
"	Suisun Bay	Atlantis x Susan	Beall Greenhouse Co.
"	Yellowstone River	Kuakini x C. Sara Cohn	Charlesworth & Co. W. W. G. Moir
Odontioda	Adwood	Odm. Adonia x Oda A. G. Ellwood	
Oncidium	Ornithogrea	cabagrae x ornithorhyncum	
February, 1958			
Brassolaeliocattleya	Annic	Flame x Lc Supreme	Horticulture Flandria
"	Estande	Bc. Estelle x Lc. Corisande	Stuart Low
"	Frant	Irene x Lc. Corisande	" "
"	Golden Feather	C. Probity x Joyance	Armacost & Royston
"	Golden Hind	Aprica x Lc. Archer	Esmond B. Martin
"	James Healy	C. trianae x Ursula	Aston L. Chen
"	Kang-Tu	Bc. Rusthall x Lc. Druid	Li Chin-Sheng
"	Oroville	Joyance x C. dowiana	Armacost & Royston
"	Phyllis Joy	Bc. Albion x Caligula	Aston L. Chen
"	Tien-E	Bc. Enchantress x Lc. Cynthia	Li Chin-Sheng
Brassocattleya	Enton	C. Enid x Thorntonii	" "
"	Pei Feng	Enton x C. George Eastman	Stuart Low
"	Winter Joy	C. Zoe x Hartland	Waldemar Silva
Cattleya	Brasil	Snowdon x Mlle Louise Pauwels	R. H. Gore—Orchids
"	Dark Emperor	Nigritian x Nigrella	
"	Dreadnought	Joyce Hannington x Clementine Goldfarb	A. N. Pierson
"	El Cerrito	Henrietta Japhet x Snow Song	Armacost & Royston
"	Euna Lee Dunn	Belgica x trianae	Thornton's Orchids (R. H. Gore)
"	Guararapes	loddigesii x Odalisque	Waldemar Silva
"	Ledana	Leda x Woltersiana	Li Chin-Sheng
"	Linda Lee	Michaelmas x trianae	Thornton's Orchids (R. H. Gore)
"	Mary Moser	Empress Belle x Bob Betts	The Jewel Box (E. Suyama)
"	Mosnor	Eleanore x mossiae	Li Chin-Sheng
"	October Bride	Enid x Oratani	A. N. Pierson
"	Pai-E	Mosnor x George Eastman	Li Chin-Sheng
"	Potiguara	Monique Denis x labiata	Waldemar Silva
"	September Beauty	Oratani x Brussels	A. N. Pierson
"	Sharon Muller	White Sail x Snowdon	J. A. Muller
"	Tymbira	intermedia x Snow Queen	Waldemar Silva
"	Viola Tanaka	Empress Belle x General Patton	The Jewel Box (E. Suyama)
"	White Thanksgiving	Joyce Hannington x Ida Kingsbury	A. N. Pierson
Cymbidium	Mary Bea	Rosanna x Heathrow	Dos Pueblos
"	Montecito	Joy Sander x Sparta	
"	Nabob	Bimbo x Naomi	Sherman Orchid Gardens
"	Sayonara	Apollo x Nam Khan	Dos Pueblos

Name	Parentage	Flowered by
Cymbidium Starily	Starlight x Sicily	Sherman Orchid Gardens
" Virginia Knight	eburneo-Lowianum x Rosanna	Dos Pueblos
Cypripedium Arpege	Detaille x Girardon	Maurice Vacherot
" Bandot	Peridot x Banchory	Sherman Orchid Gardens
" Canrobert	Pepita x Heraut	Maurice Vacherot
" Challow	Radley x Viking	R. & E. Ratcliffe
" Corrida	Sully x Doraëus	Maurice Vacherot
" Coulburn	Roger Coulston x Borburn	R. Boden (Mansell & Hatcher)
" Devenden	Whitehall x Actæus	Stuart Low
" Fireon	Firebrand x Decameron	Sherman Orchid Gardens
" Goulda	Goultenianum x Magda	
" Grove	Radley x Dalla	R. & E. Ratcliffe "
" Imogene Sherman	Magda x Elizabeth Keeley	Sherman Orchid Gardens
" Kaze	Megantic x Omar	Kuninari Tokugawa
" Oro Blanco	insigne x F. C. Puddle	Sherman Orchid Gardens
" Piccolo	Bruno x Moth	Dr. W. Stirling
" Psapha	Aiche x Casanova	Maurice Vacherot
" Sally Sander	Bordure x F. C. Puddle	Sanders (R. & E. Ratcliffe)
" Serval	Orientum x Ocelot	Dr. W. Stirling
" Skipper	Peridot x Maya	Sherman Orchid Gardens
Dendrobium Quek Boon Siew	superbiens x Constance	Khoo Kay Ann
Laeliocattleya Audace	Poussin x C. Fabianid	Maurice Vacherot
" Butte	C. Prospector x Windermere	Armacost & Royston
" Cheyenne	C. Prospector x Marduk	
" h. Deep Purple ign	? x ?	Earl J. Small "
" Fort Tevo	C. Dupreana x Marduk	Armacost & Royston
" Gordon Dillon	Flandria x C. Remy Chollet	Horticulture Flandria
" Hades	Cocarde x Jocelyn	Maurice Vacherot
" Hsiao Kang Shan	C. Ledana x Druid	Li Chin-Sheng
" Long Chuang	C. Leda x Navalange	
" Petahoe	Tahoe x C. Peetersii	Armacost & Royston
" Ta Kang Shan	C. Ledana x Momus	Li Chin-Sheng
" Tecolote	Elissa x C. Dupreana	Armacost & Royston
" Tsun Neu	Schroderae x Navalange	Li Chin-Sheng
Odontioda Astomar	Marispum x Astoria	Charlesworth & Co.
" Pittargia	Margia x Pittiae	" "
" Pumanda	Marispum x Odm. Mandalum	" "
Odontoglossum Connero	Nerophion x Claricon	" "
" Goldilocks	eximium x Brimstone Butterfly	R. & E. Ratcliffe
" Manopha	Manperor x Ophanto	Charlesworth & Co.
" Mirandole	Colorado x Melisande	Maurice Vacherot
" Perrymanda	Perryanum x Mandalum	Charlesworth & Co.
" Phantopum	Ophanto x crispum	" "
Phalaenopsis Benita	Winged Victory x Mem. Nasu Tom-aguchi	Shaffer's Trop. Gdns
" M. de Almeida	formosum x rosea	Hung Che-Ying
" Eric Holtum	Artemis x amabilis	Khoe May Seng
" Kao-Hsiung	schilleriana x Shou Shan	Li Chin-Sheng
" h. Shou Shan ign.	? x ?	" "
Sophrrolaeliocattleya Gladys Bliss	Radians x Lc. Cassandra	S. R. Fouraker (R. Kiesewetter).

Correction to Add. I:

Page 279, col. 1, line 30. For Marduck read "Marduk."

Corrections to July List:

Oncidium Pastel, Sunrise, Tiny Tim, Waikiki Sunset, delete syn. luridum.

Correction to October List:

Delete Cattleya Memoria Fred K. Sander, etc.; Flowerer and Originator of Miltonia Woodlands should read Stuart Low.

Correction to May List, 1946:

Parentage of Odontonia Tyanda should read Odtina. Tyana x M. Armada.

Correction to Main Work to 1946:

Page 238, col. 2, line 25, Tyana x M. Armada should read: Tyana x M. Armada. Table II, page 228, col. 2, line 44: Armada should read Armada. Table II, page 290, col. 2, line 28: x Armada=Tyandra, should read: x Armada=Tyanda.

† Reprinted by kind permission Orchid Review (England) Dec. 1957 to February, 1958

Spare Time Opportunity

EARN EXTRA MONEY GROWING DWARF TREES

You too can surprise your friends by starting a profitable home business growing these fascinating, living miniature trees only 12" tall. No experience necessary. For full details send stamped addressed envelope to:

Ming Dept. OR1, Box A25, G.P.O., Perth.

Electric | for
Soil | *Orchid Growers*
Mixers | *Mushroom Growers*
| *and Nurserymen*

HILLS ENGINEERING PTY. LTD. PARRAMATTA.
YL7777

Dendrobiums from India

- | | | |
|--|--|--|
| D. Aggregatum, 30/-. Yellow. | D. Moschatum, 30/-. Apricot. | D. Jamesianum, 25/-. White & red. |
| D. Chrysotoxum, 30/-. Yellow. | D. Pierardii, 30/. Pale mauve. | D. Primulinum, 25/-. Pale to dark mauve. |
| D. Dalhousianum, 30/-. Cream and fawn. | D. Hildebrandii, 30/-. White & yellow. | D. Fimbriatum, var. oculatum, 25/-. Yellow, maroon throat. |
| D. Formosum, 30/-. White & yellow. | D. Densiflorum, 25/-. Yellow. | D. Farmerii, 20/-. Pale Pink. |
| D. Nobile, 30/-. Purple. | | |

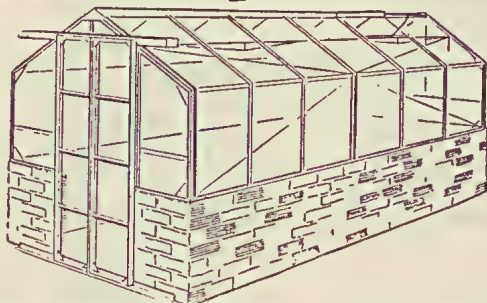
AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet
Price: £91-6-0

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

Cypripediums a Speciality

Most Awards and good quality Show Varieties in stock, but not all available. Plants thrive under conditions, and inspection of culture will convince that Cypripediums are as easy to grow as Cymbidiums, even under cold conditions. CYMBIDIUMS: Award and Show types always in stock.

INSPECTION: Saturday afternoon or Sundays only

TREMORVA ORCHIDS

R. E. Trenerry

24 MURRAY STREET, LANE COVE, N.S.W.
(Off Ralston Street, near Mowbray Road Bus Shed)

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

A CULTURAL TABLE OF ORCHIDACEOUS PLANTS

BY J. MURRAY COX

A limited number of copies of this well known book are now
available . . . price £4/4/-

THE SHEPHERD PRESS PTY. LTD.
YURONG ST., SYDNEY - - FA3178

Wanted to purchase back number Australian Orchid
Review Volumes 17, 18, 19, years 1952, 1953, 1954,
suitable for binding.

Blayney Rural Supply, Adelaide Street, BLAYNEY.

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed.
Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels
£2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross
£1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results
it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

Books on Orchids, Etc.

- ORCHIDS IN AUSTRALIA (Fred Moulen). Full Cultural procedure, 84 full-colour plates. £6. 6. 0. Post 2/-.
- ORCHIDS (Lecouffe & Rose). Col. plates. £1. 8. 3. Post. 9d.
- ORCHIDS ARE EASY TO GROW (Logan & Gosper). A complete manual of Orchid Culture. Col. plates.
£3. 15. 0. Post. 1/6.
- ORCHIDS OF GUATEMALA (O. Ames & D. S. Correll). Illust. 2 Vols. £6. 11. 9. Post. 3/6.
- PLANT PROPAGATION PRACTICES (J. S. Wells). Illus. £2. 16. 6. Post. 1/6.
- ORCHIDS—THEIR CULTURE (Bruce Hogg of Melb.). Col. plates. £2. 10. 0. Post. 1/3.
- THE FLOWER SHOW GUIDE (A. W. Wood). Complete directions for Exhibiting, Judging and Staging. Illust.
£1. 11. 0. Post. 1/-.
- EXOTIC PLANTS OF THE WORLD—Trans. A. J. Huxley. Col. plates of Orchids, etc. £2. 0. 0. Post 1/6.
- ORCHIDS OF AUSTRALIA (Nicholls). Part 4. Now available. £9. 0. 0. Postage extra.
- CONWAY'S ENCYCLOPAEDIA OF FLOWER ARRANGEMENT. Col. and B/W Plates. £3. 2. 0. Post. 1/6.
- SOIL-LESS GARDENING FOR FLAT AND HOME (Maxwell Bentley). Illust. £2. 0. 0. Post 1/-.
- COMPOST FOR GARDEN PLOT OR THOUSAND-ACRE FARM (F. H. Billington). Illust. 12/6. Post 1/-.
- YOU TOO CAN GROW ORCHIDS (Handcock & Smith). Col. plates. 16/6. Post 10d.
- We search of the world successfully for Rare and Out-of-print Books.
- Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies &
General Literature. Lists Free.
- We are Specialists in Microscopes, Prismatic Binoculars and Day and Astronomical Telescopes, Magnifiers, Com-
passes, Barometers, etc. Write for Lists.
- 10X British Aplanatic folding Magnifiers—of great use to Orchid lovers. £2. 18. 6.

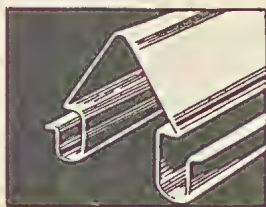
N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	- - - - -	6/3 per length
GLAZING BAR CLIPS	- - - - -	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	- - - - -	
64 Sheets to Case=100 sq. ft.	- - - - -	87/- per case

Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
 49 Aird Street, Parramatta — YL9961
 135 Forest Rd., Hurstville — LU2066
 67-69 Burelli St., Wollongong—B3301-8
 932 Pacific Highway, Chatswood—JA3462

Lc. Mary "Rose" Special

1965 Lc. Oakland (Lc. Buccaneer 'Swarthy' x Lc. Mary Rose 'Exquisita' A.M. A.O.S.). Solid dark purple labellum, no gold, large—Fall. £4.9.6.

2001 Lc. Sacramento (C. Prospector 'Helen Buss' x Lc. Mary Rose 'Exquisita' A.M., A.O.S.). Prolific, large, dark, well shaped flowers—Winter. £4.9.6

2006 Lc. Emily Montgomery (C. Tellus x Lc. Mary Rose 'Exquisita' A.M., A.O.S.). Very large dark—Winter to Spring. £4.9.6.

Three crosses with our Lc. Mary Rose 'Exquisita' A.M. A.O.S., all of superior proven exhibition and award quality.

Advanced plants out of 4" pots ready to pot into 6".

First bloom this Fall or Winter.

Rod McLellan Co.

1457 El Camino Real
 South San Francisco, Calif.
 U.S.A.



We are sharing our best in offering any TWO of these three crosses for £5.19.0. or one-third off.



Orchids in Australia

by FRED MOULEN, (Well-known Lecturer and
Orchid Authority)

Introduction by Dr. SIR JOHN HALL BEST
(President of the Orchid Society of New South Wales)

Preface on the history of Orchid Culture in Australia by
Dr. J. A. VOTE.
(Past President of the Orchid Society of New South Wales)

This is a superb DE-LUXE issue in a 8" x 10" volume, hard cloth bound, containing a selection of 100 full-colour reproductions from Kodachrome slides, of the most popular Cymbidiums, Cattleyas, Vandas, Cypripediums, Dendrobiums, Miltonias, Odontoglossums, etc., grown in Australia, with text and commentary by Fred Moulen.

This shipment is heavily booked. As it is a LIMITED Edition, also covering U.S.A., your order must be sent very early to any Bookseller in Australia, or to

AUSTRAL-EDITA PTY. LTD.
BOX 3242 G.P.O., SYDNEY
or . . . 55 McElhone Street, E. Sydney

PRICE: £6.6.0. plus 3/- postage.
Please add exchange to country or interstate cheques.

Phone: FA5147



No. 24
(See List "Limberlost" Seedlings below)

*Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas*



"LIMBERLOST" Orchid Seedlings

*First General Offering of Orchid Seedlings to Old
and New Growers. Fascinating Hybrids that will bring
both Pleasure and Profit as they mature.*

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10 V. Tatzeri x V. Caroline Robinson
- No. 11 V. Sanderiana x V. Rothschildiana
- No. 13 V. Mary Foster x V. G. Myamoto
- No. 22 V. E. Fujinaga x V. Sanderiana
- No. 29 V. G. Triboulet x V. Coerulea
- No. 25 V. Haleakala x V. Sanderiana
- No. 31 Teres Giganteum x V. Cooperi var. Choo Yam Neo
- No. 37 V. Tatzeri x V. Coerulea
- No. 56 V. Cooperi var. Choo Yam Neo x V. Joaquim Atherton
- No. 46 V. Sanderiana x V. Suavis
- No. 26 V. Henrietta Ho x Renanthera Storiei
- No. 35 V. Dearei x Arachnis Ishbel
- No. 40 Phalaenopsis Denevei x Arachnis Ishbel
- No. 36 V. Henrietta Ho x Arachnis Ishbel
- No. 30 V. Henrietta Ho x Arachnis Maggie-Oei
- No. 55 V. Alice Fukunaga x Arachnis Maggie-Oei
- No. 60 V. Tatzeri x Arachnis Maggie-Oei
- No. 24 D. Schroederianum var. bicolor
- No. 27 D. Janice Tanaka x D. Broomfieldii
- No. 39 D. Broomfieldii x D. Phal. var. Snow White
- No. 48 D. Bigibbum x D. Veratrifolia
- No. 57 D. Tofftii x D. Phal var. Snow White
- No. 58 D. Phal. var. Snow White x D. Grantii
- No. 62 V. Dearei x V. Joaquim var. Atherton
- No. 59. Oncidium Lanceanum
- No. 135. V. Coerulea x V. Coerulea
- No. 71. Tatzeri x Arachnis Insignia
- No. 149 Cymbid. Aloifolium x Cym. Bicolor
- No. 175 D. Aurichlei x D. Phal. var. Snow White
(Assorted if desired)

Above Plants: size (2"-4") 7/6 ea.; £4/4/- per doz., ex Community Pots.
Special Quotes for smaller size COMMUNITY PLANTS on application.

- No. 13. V. MARY FOSTER x GERTRUDE MYAMOTO. Advanced seedlings. 6"-8"—25/- ea.
- No. 24 DENDROBIUM SCHROEDERIANUM var. BICOLOR. Flowering size—21/- ea.
- No. 35. ARANDA FRECKLES. Advanced seedlings, 12"—25/-
- No. 26 VANDA HENRIETTA HO x RENANTHERA STORIEI. Advanced seedlings. 8"—25/- ea.
- No. 39.. D. BROOMFIELDII x D. PHAL. VAR. SNOW WHITE near flowering size—25/-
- No. 36. V. HENRIETTA HO. x ARACHNIS ISHBEL. Advanced Seedlings. 12"—25/-

Please add 7/6 with orders to cover Air Freight and forwarding charges.
If phone number, please add.

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.Q.



"LIMBERLOST" Orchid Seedlings

"ORCHIDS AND OTHER PLANTS" NEW CATALOGUE AVAILABLE, OVER 40 PAGES, COM-
PRISED OF 13 INDIVIDUAL LISTS COVERING A WIDE
RANGE OF CULTIVATED PLANTS. INQUIRIES
INVITED.

COMMUNITY POTS. $\frac{1}{2}$ " to 1" plants. 8 Seedlings per pot, 20/- per pot.

- No. 13. V. M. Foster x V. G. Myamoto
- No. 37. V. Tatzert x V. Coerulea
- No. 57. D. Tofftii x D. Phal. Snow White
- No. 35. V. Dearei x Arachnis Ishbel
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei
- No. 63. V. Henrietta Ho x Insignis
- No. 71. V. Tatzert x Arachnis Insignis
- No. 75. V. Tatzert x Arachnis Ishbel
- No. 135. V. Coerulea x V. Coerulea
- No. 134. Superbum giganteum x D. Superbum huttonii
- No. 136. V. Suavis x V. Manila
- No. 141. V. Kon Tiki x Opisanda Kenneth Morley
- No. 151. V. Kon Tiki x V. Manila
- No. 149. Cymbid. Aloifolium x C. Bicolor
- No. 153. V. Queenie Pie x V. Manila
- No. 164. V. Ellen Noa x V. Suavis
- No. 148. V. Tatzert x V. Manila
- No. 189. D. Sanders Crimson x D. P. Peterson

- No. 175. D. Auricleii x D. Phal. Snow White
- No. 193. D. Dicupham x D. Canaliculatum pallidum
- No. 200. V. Manila x V. G. Triboulet
- No. 242. V. Diana x V. La Paloma
- No. 232. D. Sanders Crimson x D. (N/Guinea Ceratobium) *103.
- No. 166. V. A. Fukunaga x Denisoniana herbraica
- No. 138. V. Tatzert x Renanthera Storiei
- No. 89. V. Coerulea x V. Dearei
- No. 184. V. Manila x Opisanda K. Morley
- No. 254. D. Mirabellianum x D. Bigibbum
- No. 142. V. Manila x V. A. Fukunaga
- No. 147. V. Tatzert x V. Suavis
- No. 177. D. Phalaenopsis alba x D. Phal. Snow White
- No. 176. D. Schroederianum alba x D. Phal. Snow White
- No. 227. V. Kon Tiki x V. Honolulu
- No. 250. V. Ellen Noa x Arachnis Insignis
- No. 278. Saccobolium Giganteum x V. Laotica.

COMMUNITY POTS. $\frac{1}{2}$ " to 1" plants. 8 Seedlings per pot, 30/- per pot.

- No. 61. D. Phalaenopsis var. Snow White x self
- No. 97. V. M. Dinger (Java) x V. A. Fukunaga
- No. 105. V. Carol Hirano x V. Coerulea
- No. 160. D. Pompadour x D. Phalaenopsis Ruby
- No. 163. (D. Phal. FCC x self) x Pompadour
- No. 178. D. Pompadour x D. Schroederianum FCC self
- No. 194. V. Teres Alba x V. Ellen Noa
- No. 205. D. P. Peterson x D. Phal. FCC self

- No. 260. V. Waipuna x V. Sanderiana
- No. 28. V. Iolani x V. Sanderiana
- No. 255. D. Anouk x D. Agnes Ann
- No. 237. V. Parishii var. Marriotiana x V. Ellen Noa
- No. 258. D. Lady Hamilton x D. H. Fukumura
- No. 252. V. Kinau x V. Sanderiana
- No. 227. V. Kalapana x V. Onomea
- No. 261. V. G. Myamoto x V. Sanderiana

COMMUNITY POTS. 1" to 2" plants. 5 Seedlings per pot, 20/- per pot.

- No. 13. V. M. Foster x V. G. Myamoto
- No. 37. V. Tatzert x V. Coerulea
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei
- No. 35. V. Dearei x Arachnis Ishbel
- No. 36. V. Henrietta Ho x Arachnis Ishbel
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei
- No. 60. V. Tatzert x Arachnis Maggie-Oei
- No. 71. V. Tatzert x Arachnis Insignis
- No. 39. D. Broomfieldii x D. Phal. Snow White
- No. 40. Phal. Denevei x Arachnis Maggie-Oei
- No. 46. V. Sanderiana x V. Suavis
- No. 48. D. Bigibbum x D. Veratrifolia

- No. 57. D. Tofftii x D. Phal. Snow White
- No. 58. D. Phal. Snow White x D. Grantii
- No. 134. D. Superbum giganteum x D. Superbum huttonii
- No. 135. V. Coerulea x V. Coerulea
- No. 59. Oncidium Lanceanum
- No. 175. D. Auricleii x D. Phal. Snow White
- No. 29. V. Gilbert Triboulet x V. Coerulea
- No. 25. V. Haleakala x V. Sanderiana
- No. 10. V. Tatzert x V. C. Robinson
- No. 11. V. Rothschildiana x V. Sanderiana
- No. 141. V. Kon Tiki x Opisanda K. Morley
- No. 153. V. Queenie Pie x Manila

COMMUNITY POTS. 1" to 2" plants. 5 Seedlings per pot, 30/- per pot.

- No. 22. V. Sanderiana x V. E. Fujinaga
- No. 97. V. M. Dinger (Java) x V. A. Fukunaga
- No. 61. D. Phalaenopsis Snow White x Self

- No. 105. V. Carol Hirano x V. Coerulea
- No. 163. D. Phal. FCC self x D. Pompadour
- No. 194. V. Teres Alba x V. Ellen Noa.
- No. 205. D. P. Peterson x D. Phal. FCC Self.

PLEASE ADD 7/6 AIR FREIGHT AND FORWARDING CHARGES FOR FIRST THREE POTS, 2/6
EACH ADDITIONAL TWO (2) POTS.

SEEDLING CULTURAL CHARTS SUPPLIED FREE ON REQUEST.

PHONE 9262

J. E. Jones,

"LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS, NTH QSLD.

UNSURPASSED QUALITY
ORCHIDS
 by
 (P. F. & F.)
VACHEROT & LECOUFLE
 AUTUMN AND WINTER SPECIAL
 OFFERINGS
 sent on request for
CATTLEYAS
MILTONIAS

Adult plants and seedlings
 C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
 NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
 BOISSY ST. LEGER, SEINE & OISE
 FRANCE.

Telephone: 42 Cables: VALEC
 Boissy St. Leger.

ODONTOGLOSSUMS ODONTIODAS

and allied genera in great variety are available
 to you from the

**CHOICEST STOCK IN THE
 WORLD**

**HIGH QUALITY MODERN
 HYBRIDS**

in a wider colour range than exists in any other
 generic group of orchids.

**NO LESS THAN 68 AWARDS BY
 THE ROYAL HORTICULTURAL
 SOCIETY SECURED BY OUR
 ODONTOGLOSSUMS AND ALLIED
 GENERA SINCE 1948.**

We shall have the pleasure in quoting you in
 these or other genera on advice of your
 requirements to

CHARLESWORTH & Co. Ltd.
 Haywards Heath, Sussex, England

Dendrobiums from India

- | | | |
|------------------------------------|-------------------------------------|-----------------------------------|
| D. Aggregatum, 30/-. Yellow. | D. Primulinum, 25/-. Pale to dark | D. Moschatum, 30/-. Apricot. |
| D. Chrysotoxum, 30/-. Yellow. | mauve. | D. Pierardii, 30/-. Pale mauve. |
| D. Dalhousianum, 30/-. Cream and | D. Fimbriatum, var.: oculatum, 25/- | D. Hildebrandii, 30/-. White and |
| yellow. | Yellow, maroon throat. | yellow. |
| D. Formosum, 30/-. White & yellow. | D. Farmerii, 20/-. Pale pink. | D. Densiflorum, 25/-. Yellow. |
| D. Nobile, 30/-. Purple. | | D. Jamesianum, 25/-. White & red. |

AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney
MON., SEPT. 29th MON., OCT. 27th MON., NOV. 24th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane
FRI., SEPT. 12th FRI., OCT. 10th FRI., NOV. 14th

Patron: Sir JOHN B. CHANDLER, Swann Road, Taringa, S.W.1.

President: E. A. KNOBLAUCH, Denham Terrace, Wellers Hills, Brisbane.

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY, 59 Armentieres St., Kedron, Brisbane.

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.
MON., SEPT. 15th MON., OCT. 20th MON., NOV. 17th

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide
THURS., SEPT. 4th THURS., OCT. 2nd THURS., NOV. 6th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: R. J. LANGDON, 8 Regent St., Millswood

Hon. Secretary-Treasurer: F. C. BRIDGE, Elizabeth St., Woodside. Phone 01, Woodside 69.

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.
FRI., SEPT. 26 FRI., OCT. 24th FRI., NOV. 28th

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Hon. Secretary: H. W. HILL, 20 Waterford St., Inglewood.

Hon. Treasurer: A. A. FARRANT, 32a Coode St., Mt. Lawley.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* Miss J. Sargison. *Hon. Secretary:* Mrs. R. F. Gee,
16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Wholly set up and printed in Australia by the Proprietors, Shepherd & Newman Pty. Ltd., Yurong St., Sydney, N.S.W.
H. J. Lawler, Hon. Editor.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review

PUBLISHED QUARTERLY

VOLUME 23. No. 4

PRICE 3/6

DECEMBER, 1958



DISTRICT EXHIBIT BY MOSMAN H. G. & O. S. AT N.S.W. FESTIVAL

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

The Illustration below depicts Orchid splendour at Frank Slattery's Nursery.



... Orchids ...

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

Here is an excellent opportunity to add new varieties to your collection at reasonable cost.

They are all sturdy bush-house grown plants ex 4" pots. Lists Available.

VANDAS. Latest American strap leaf and semi-terete types. A good variety of these plants available in various sizes. Plants offered include the famous "NELLY MORLEY" John Noas, Original 512 cross.

CATTLEYAS. A good selection of modern hybrids nearing flowering size.

MILTONIAS. Flowering size plants. Latest French hybrids.

DENDROBIUMS. Latest Nobile type hybrids. Plants to flower next season. Also Indian types in many varieties.

PHALAENOPSIS. Seedlings available in pinks and whites.

CYMBIDIUMS. All the top-class awards and show varieties on hand. Also top-line scarce types namely RIO RITA, VAR. RADIANT, F.C.C.R.H.S., MIRETTA VAR. MATCHESS. Best Green and Award of Distinction N.S.W.O.S. Festival, 1958. Marmie Kingsford var. Erin, H.C.C. Aldis Lamp var. Arncliffe, Nam Khan var. Nomani, Bal-kis, Jeanette and many others.

HUNDREDS OF BACK BULBS TO SUIT EVERYBODY

The nursery is open 7 days weekly and visitors are always welcome.

Plants are sent everywhere in Australia or overseas on request.

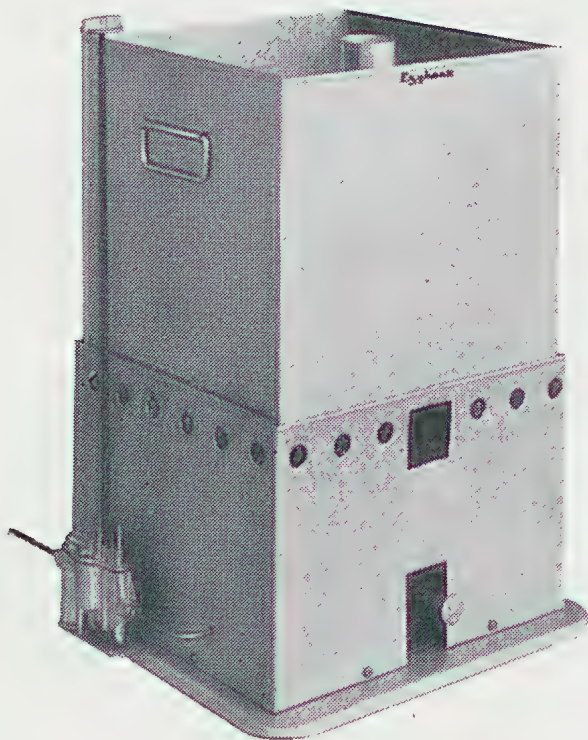
PLEASE SEND STAMPED ADDRESSED ENVELOPES FOR LISTS

Frank Slattery's

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985



Just Released!

"ezyheat"

**HOTHOUSE
& AQUARIUM
KEROSENE
HEATER**

£18-10-0

Heat output is sufficient for a standard 9' x 12' glasshouse. A large removable water reservoir keeps the air moist.

THE BURNER is the patented "Billar" burner . . . operates without wicks or asbestos, cleaning only once yearly.

THE CONTROLS have the famous "Ezyheat" control valve unit.

THIS HEATER OPERATES 24 HOURS ON ONE GALLON OF KEROSENE.

The EZYHEAT HOTHOUSE HEATER is the result of eight years of research and practical tests and is designed for the average horticulturist wanting a constant warm, humid and CLEAN atmosphere.

By concentrating solely on a solid construction and first class performance, without luxurious trimmings, it is possible to bring the unit well within the reach of every amateur or professional, at the reasonable price of £18/10/- f.o.r. Melbourne.

The EZYHEAT HOTHOUSE HEATER can be directly connected to a standard 44 gallon drum or to a large tank obtainable from an Oil Company. If solely for agricultural or horticultural purposes these drums or tanks can be loaned on payment of a deposit.

Standard 2" downpipe can be affixed to the chimney leading the exhaust gas OUTSIDE the hothouse eliminating any risk of contamination of your plants by CO₂ or other harmful effects. If employing a zig-zag outlet, approx. 20% more heat is retained in the hothouse.

At small extra cost we will supply a tap with built-in strainer to fit the drum or tank. All other parts are obtainable at low cost.

Send us a rough drawing of your hothouse giving the major dimensions, location and height of benches, width of passages, etc. We will send you—FREE OF CHARGE—our advice how to install the hothouse heater to the greatest advantage and a detailed statement of the total cost including tap, strainer and fuel pipes.

YOU CAN RUN AN EZYHEAT HOTHOUSE HEATER ON SEVEN GALLONS OF KEROSENE
FOR ONE WHOLE WEEK—DAY AND NIGHT

PANTAS PTY.
LTD.

205 LATROBE STREET, MELBOURNE. PHONE FB 3744 or FB 3746
(between Swanston and Elizabeth Streets)



MONICA HARGREAVES

Modernize your Cymbidium collection with world famous dos Pueblos seedlings.

Genetics and line breeding have led to surprising results. New colours, larger size, heavier substance of our blooms make them especially suitable for export and show bench display.

This has been clearly demonstrated by the first flowering of these seedlings at our nursery this year.

We especially recommend:—

D.P. 5043 Rosanna Pinkie FCC/RHS x Enid Haupt

D.P. 5046 Spartan Queen Mrs. Ireland x Rosanna Pinkie FCC/RHS

D.P. 5053 Rosanna Pinkie FCC/RHS x Sicily Lucy.

Price ex 3" pots 70/- each.

Selection of three plants, ten guineas.

Free list of all crosses now available on request.

dos pueblos

Orchid Company

(AUST.) PTY LTD.

YORK MEREDITH
Managing Director

SOUTH CREEK ROAD, DEE WHY WEST • New Telephone Number—XW6321

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

*For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.*

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cyripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send
for Free
Price List



A section of our 30,000 plants of Vanda Joaquim.

VANDAS

Strap leaved.
Semi-terete.
Quarter terete.
Community pots to flowering size.

Send for free and
complete price list.

Send for free and
complete price list.

DENDROBIUMS

D. phalaenopsis hybrids.
D. taurinum hybrids.
D. stratiotes hybrids.
Community pots and flowering size.
Dendrobiums from India (flowering size only).

CATTLEYAS
PHALAENOPSES (pink)
PHALAENOPSES (white)
EPIDENDRUMS (reed stem)
ARACHNES
ARANDAS

Send for free and
complete price list.

Send for free and
complete price list.

KIRKWOODS ORCHIDS

342 SHERIDAN ST.
CAIRNS NORTH, NTH QLD.
PHONE: 2385

ORCHID SUPPLIES

from FRANK SLATTERY

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

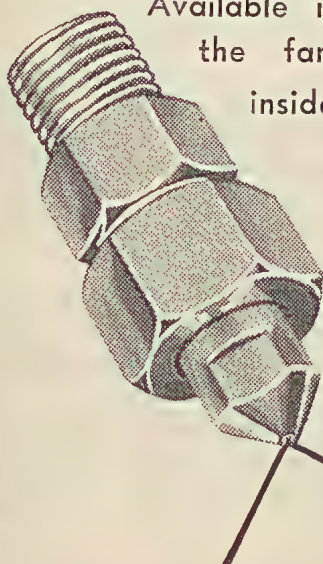
Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 8d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

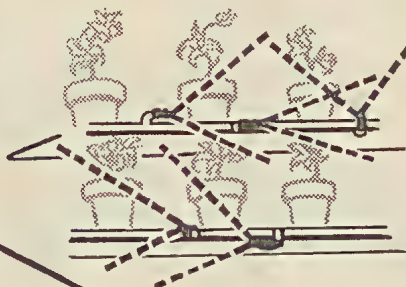
Australian Topea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "MONARCH"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT

FRANK SLATTERY'S
ORCHID NURSERY

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown *Odontoglossum* and *Odontioda* seedlings in large variety at exceptionally low prices.

Miltonia seedlings, both French and English raised.

Hawaiian *Dendrobium* seedlings of the best crosses, from 10/-

Hawaiian *Vanda* seedlings, latest crosses of the highest quality, from 10/-.

French and American *Phalaenopsis* seedlings, ranging in price from 25/- to 90/-, according to size and cross.

Intergeneric *Oncidium* seedlings of interest at 10/- each.

Some exceptional *Sophrrolaeliocattleya* seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of *Cattleya* seedlings in all sizes for you to select from. These range in price from 20/- for small seedlings, and from 55/- for seedlings of full flowering size. Many *Cattleyas* can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

John Bisset

For Orchids, Bush-house and Glass-house plants. We have one of the finest collections of foliage and indoor plants in Australia. Inspection is cordially invited at both our nurseries.

JOHN BISSET

Show Nursery:

8 Brisbane Avenue, East Lindfield, N.S.W.

Phone: JM1906

Sundays

General Nursery:

48 Wareemba St., Abbotsford, N.S.W.

Phone: WF8124

Week Days.

Publisher and Distributor of:

CYMBIDIUM CULTURE & VIRUS DISEASES, £1/1/-. 1/- Postage
"ORCHID HANDBOOK" BY N.S.W. ORCHID SOCIETY, 8/6.
CULTURE & AWARDS OF ALL GENERA. 6d. postage.

The World's Most Eminent and Successful Breeder's of Outstanding Hybrids

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application. . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids.

*Six superbly sturdy
seedlings, 4
sturdy bulbs from 2 inch
pots, to flower
after
two years:*

Cattleya Annette x L. C. Cynthia alba Model.
Cattleya Ballantineana x B. C. Hartland.
Cattleya Aurea x B. L. C. Cadmium.
L. C. Clothilde x B. L. C. Nugget.
L. C. Nina splashed x C. Hardyano—Warnerii.
B. L. C. Hartfield extra dark x Cattleya Horatius.
Six Fine Young Plants as listed, sent by Air Parcel Mail,
all charges paid, and insured—for—Twelve pounds ten shillings sterling.

Illustrated Catalogue and Lists sent upon application.

STUART LOW (Benenden) LTD.

JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

Free Plants for Christmas!

48 AWARD AND SHOW CYMBIDIUMS

As a special Christmas and New Year offering, one extra plant for every six purchased will be given FREE to clients who mention this advertisement. This special offer will remain open until the next quarterly issue of the "Review" is published—while the plants last!

ARABELLA, MAGNIFICENT, H.C., A.M.
ARABELLA, WAVERLEY, H.C. (twice) A.M.
BALKIS, BURRANEER
CARISBROOK, FLORENCE, A.D.
CARISBROOK, PLUM (Early).
CASSANDRA, EVADNE, A.M.
CASSANDRA, TOXTETH, A.M.
CELIA, TANANDRA (Prize Green—Early).
CERES, F. J. HANBURY, A.D. (twice).
CERES, GIRRAHWEEN, A.M.
CERES, WESTMINSTER (special pink).
CHARM, ELEGANCE, A.M., H.C. (Early).
CORDELIA KURINGAI, A.D. (Colour Champion).
CYGNUS, JANET (large, cinnamon).
CYGNUS, OPALESCENCE, H.C.
DRACOLAN, HABERFIELD
EAGLE, SNOW WHITE
EDZELL, ELIZABETH, A.M.

ESMERELDA (Prize Green).
FALCON, HABERFIELD,
FALCON, ILLAWARRA
FLAMINGO, ALLAMBIE, H.C. (twice).
GIRRAHWEEN, ENID, A.M., 1st Class Certificate.
GIRRAHWEEN, GLORIA, A.M.
GLORIANA, TUDOR ROSE, (The Champion Pastel Pink).
HISTORIAN, LINDFIELD, H.C.
ISPAHAN, MASCOT, H.C. (twice).
JANETTE, GOLDEN CROWN, A.D.
JOYANCE CINNAMON, H.C.
JOY SANDER, RUTH, H.C.
JOY SANDER, TRIUMPH
LOUIS SANDER, GIRRAHWEEN (A Champion Pastel Pink).
LOUIS SANDER, KIRIBILLI, A.M., (twice).
MIRANDA, MAISIE, A.M.
NIRVANA, WARRINGAL, H.C.

PERI, Good Big, Yellow/Lime Green.
PLOVER, No. 1. (Natural Green).
PRESIDENT WILSON, HABERFIELD.
PRINCESS ELIZABETH, THE GIANT.
PRINCESS ELIZABETH, MAISIE, A.M.
PRINCESS MARGARET, HABERFIELD.
PRIAM ADA MEECH, H.C. (Twice).
SANDPIPER, PENGILLY. (Lovely Large White, Good Shape).
SWALLOW, CONQUEST, H.C. (twice).
SWALLOW, DAFFODIL, H.C. (twice), A.M.
SWALLOW, MAGNOLIA, H.C.
SWALLOW PERFECTION, RUBY LIP
SWALLOW, SOULANGEANA, A.M. (twice), H.C.

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

EXPORT AND WESTONBIRT VARIETIES

Six flowering size green plants (leading green bulbs with leads), all different varieties, £15; per dozen, £25.

SPECIAL: Only five dozen left of the young first-year green plants (grown from back bulbs—with the back bulbs still attached in nearly all cases), well established, healthy and guaranteed—only £8 per dozen, or £30 for all 60 plants.

MAIL ORDERS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS"

Available free on request. Lists the best-known official award varieties, shows awards won and the prices of various size plants.

HABERFIELD ORCHID NURSERY

The Oldest Established Commercial Cymbidium Orchid Specialists in Australia

37 DOBROYD PARADE, HABERFIELD (SYDNEY), N.S.W., AUSTRALIA
C. W. BUSHELL, Jr. (Near Mortley Avenue) Telephone: UA5895, YX2536

Australian Orchid Review

VOLUME 23

DECEMBER, 1958

No. 4

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Awards, Orchid Society of N.S.W. Ltd.	199
Awards, Victorian Orchid Club	199
Book Review	184
Front Cover	186
Judges and Judging— <i>W. Smoothey</i>	194
Melanism in Our Orchids— <i>J. N. Rentoul</i>	187
News and Notes	169, 175, 181, 184, 186, 193, 196-201
N.S.W. Festival, The 1958— <i>Fred Jones</i>	170
Oncidiums and Their Allies, Part II— <i>W. W. G. Moir</i>	176
Orchid Culture in Summer— <i>H. J. Lawler</i>	182
Pauwelsii, My	168
Summer Culture in Victoria— <i>J. N. Rentoul</i>	189
Victorian Orchid Club Spring Show— <i>J. N. Rentoul</i>	185
Western Australia Spring Festival— <i>A. C. Dawson</i>	199

ILLUSTRATIONS

Brassocattleya (Déesse x Memoria Rosemary) 'Wondabah' H.C.C.	173
Cattleya Bob Betts 'Bexley' H.C.C.	173
Cattleya General Patton 'Balmoral' H.C.C.	192
Cymbidium Starlight 'Crown' A.M.	191
Cymbidium York 'Margaret Olive' H.C.C.	191
Cypripedium Madge Le Gros 'Windsor' H.C.C.	192
Dendrobium Mousmée	174
Dendrobium Thyrsiflorum	174
District Exhibits: 1st—North Shore Orchid Society	173
2nd—Eastwood & District Orchid Circle	174
3rd—St. George Orchid Society	191
4th—Mosman Home Gardeners & Orchid Society	Front Cover
5th—Western Suburbs Orchid Society	192

Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA:

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

N. Christoph
18 Clinton Ave.
Myrtle Bank

WESTERN AUSTRALIA:

A. C. Dawson
17 Alness St.,
Applecross

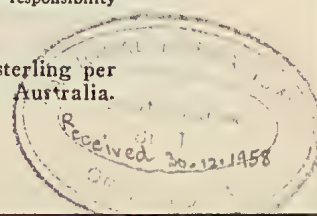
TASMANIA:

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising, neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.



My Pauwelsii

• When I first arrived in Australia I should have told my master that there were many of my clan in other countries who, on looks, shape, texture and habit, were superior to the *Cymbidium* elite of my new domicile.

Australian orchid growers were trying to amass a collection of award orchids however scarce they may have been and with no thought that there may have been better orchids at a more reasonable price to be had from other overseas countries. This same man-made scarcity was responsible for the high prices paid for award orchids and, being awards, were usually round saucer shape flowers or else possessing some distinctive colour irrespective of how large the flower eventually became.

The plants multiplied rapidly, but so did the price of them—not downwards but upwards. The resultant collapse of the "*Cymbidium* Empire" is now history and all because one man's *Cymbidium* estate was put up for auction at which buyers paid fantastic prices for plants that had so far eluded their cheque books.

The *Cymbidium* collections of the last decade are not now included in an estate for death duties. They are a horticultural monument to their past possessors and usually an encumbrance to their recipients, who can never understand how "the bug" to grow orchids came to bite the deceased. They are a collection of saucer shape flowers not now considered by exporters because of their size and, although with a heavy manuring programme they can be increased a quarter of an inch or so in diameter, the modern trend, demanded by overseas buyers, for flat blooms averaging four inches has completely changed the Australian trend in orchid collections.

Why?

Orchid flowers have become, because of our climatic conditions, a very substantial dollar producing income for this country. Exporters and private growers have established markets for our flowers in many American States. A Co-operative Society has secured buyers in many other countries, as well as in the American market, for large flowers usually in pastel or pink colours. These markets demand what they order—large flowers, and as flowers in Australia are in bloom when the rest of the world is devoid of *Cymbidium* flowers our future is assured, providing the flowers are

large and clean. Spotted flowers, the curse of growers and buyers alike, are not considered at any price. The fungus disease which causes spotting can be now controlled with Shirilan A.G. by spraying the plants and blooms with this preparation, two teaspoons of the liquid to one gallon of water, every seven days.

The persistent buyers' demand for large flowers has caused the orchid grower to change his ideas but not his ideals. He, at least, is still an ardent orchid lover and appreciates the finer flowers more than ever. He was sorry for the nations which did not realise the difference between the good Australian Award *Cymbidiums* and their own open flowers. He usually cultivated a few "rags" to supply the early June and July market so as to obtain a few pence to procure more award plants. I said *was* sorry. Today all that is changed; growers are commencing to be sorry for themselves. The older collections are becoming more and more obsolete as the demand for large flowers continues. Growers are realising that *Cymbidiums* have to be flowered correctly; even first year collectors of flowers for export are trained to obtain the demand flowers.

The Australian orchid growers, to me, are a suspicious collection of mostly English and American human seedlings as yet in the community pot size. Until they are transplanted into individual pots they are apt to follow the advice of a few old clones who appear to still have saleable collections of old award orchids.

The suspicion with which American raised *Cymbidium* seedlings arrived in this country, for various reasons, enjoyed many months of popularity due to these human clones spreading foolish propaganda. This season the plants, at least, have grown up.

Many Festivals and Shows featured the Samarkands, the La Novias, the Rosaritas, the Swallows, the Judys, and so on. Every Show had a "new look". The smaller one-time favourites were given "the sack", just as quickly as was my master's typist when she had the audacity to report for duty attired in a garment which completely discouraged all lovers of shape and form.

The new *Cymbidiums* had shape, curves, size, which could be quickly measured by the eye, and boldness which did not need a "sack" to aid their proud arching spikes.

The flowers, as yet, could not be considered for awards by Australian standards, but now growers know what is meant by an export bloom. The flowers are not really open as they have been described by those "in the know". The difference in the depth of the flower is the outstanding feature; nearly all the flowers are one inch or less in depth. Australian flowers, being saucer shape, are at least an inch and a half in depth and naturally this feature is not appreciated by the ladies who would have much difficulty in making them sit flat on a frock or coat.

The interesting feature of the crosses which have bloomed in Sydney is the reliability of the average expectation of the advertised prediction. Some crosses began to bloom in July and for A.W.B., as a parent, to produce early flowers of good shape and texture in these months, was quite a revelation for orchid growers.

Intense interest was shown as the season progressed, especially when a beautiful *Cymbidium* York received an A.M. at Sydney Town Hall for its young managing director of Dos Pueblos Orchid Co., Mr. York Meredith. A far greater honour was bestowed upon this lovely orchid. H.E. Lady Slim, wife of the Australian Governor-General, graciously permitted this newest Award of the Orchid Society of N.S.W. to be known as *Cym. York 'Lady Slim'*, A.M. Each green bulb was reported to have been sold for a three figure sum.

It seemed as though my English relatives were determined to show that they could still produce an award orchid in the midst of this galaxy of beautiful flowers of American origin, even though the plant was purchased for America as a seedling. It was still English as was *Cym. Miretta 'Matchless'*, which also gained an award, though for Distinction, for owner Mr. Frank Slattey. This natural green orchid with its lovely red lip is probably the best green flower seen to date in Australia.

These lovely creations were like gleaming 1959 model English Rolls Royce motor cars. They were not for the rank and file nor for you, nor my master. They were just to look at and anyhow they were too illustrious just to buy for the export market. Were there not plenty of "T. Model Fords" to buy? Lovely new colours, plenty of flowers per spike, large close to award creations which would not be out of fashion before the next registration was due. The flowers had been produced in conditions which would have been fatal to most home

grown spikes. Clear sunlight with just a saran cloth covering which was almost transparent. No mollycoddling, no staking or shading. Greens, yellows, whites and pinks all were flowered in their ground bed domiciles and yet—

How much will the flowers improve when flowered under glass?

There are sceptics who believe that the heavy manuring of the plants caused the size of these export blooms to be increased to their extreme widths. There are others who believe that the plants are in the wrong glass house, and still others who have now outgrown their community pots and have been convinced that with the advent of this season's new creations a new era has commenced for *Cymbidiums* in Australia. Definitely there is no need now to worry about buying pieces of old award *Cymbidiums*.

Christmas and buying seem to be synonymous. On behalf of my master and myself I should very much like to wish all our readers, our Associate Editors, our many friends and establishments who subscribe articles, etc., and our Australian and International Orchid Societies our sincere wishes for a very happy Festive Season.

As Australians have taught me to say—"All the best."

Culturally speaking,
The Editor's Pauwelsii.

• *Tasmanian Orchid Society*:—Mr. F. W. Chilvers, Vice-President of the Tasmanian Orchid Society, gave an interesting screening and annotation of his recent tour abroad. This was held in the Society's Room. Mr. Chilvers is Supt. of Parks and Reserves, so he was able to give an authoritative comment on his pictures. These combined a mixture of well-known flower shows, also parks and gardens, besides the more formal settings of the Continent. A buffet supper followed.

Mrs. L. O. Hilyard very kindly threw open her lovely home and gardens for an American Tea one pleasant spring afternoon. A Devonshire Tea was served in the house. Mrs. Hilyard, one of our committee members, organised everything well. She had plenty of helpers.

We are indebted to Sir John Hall Best, who has graciously asked our President, Miss J. Sargison, over to the Sydney Show to join the official party there. We appreciated this gesture very much.—E. J. Gee.

The 1958 N.S.W. Festival

FRED JONES

• The Annual Orchid Festival, presented by the Orchid Society of New South Wales Limited, was held at the Sydney Town Hall from the 16th to the 19th September, 1958, a week later than usual, and it was undoubtedly the finest of all. A good year for Cymbidiums, together with the later date, saw a magnificent display presented to the public.

The opening ceremony was performed by His Excellency, Field Marshal Sir William Slim, the Governor-General of Australia, who, during his address, mentioned the fact that he had seen and admired the native orchids in the various countries where he had served during his Military career. Subsequently members of the committee and their wives were presented to His Excellency by the President of the Society, Sir John Hall Best.

This year, despite keen competition, the North Shore Orchid Society again won the District Exhibit Competition. Another superb display, built around the theme of an Orchid Vendor, asleep in a courtyard, the quality and quantity of the Cymbidiums and miscellaneous orchids left little to be desired and brought the point score to the total of 174.97. The profusion of Cymbidiums included Sussex 'Laelia Sasso', Dorchester 'Jeanette', a magnificent Ceres 'Girrahween', Edzell 'Elizabeth', Swallow 'Hebe', Princesse Astrid 'Dorothy', Iris Hepburn, a light reddish pink shade, Louis Sander 'Kirribilli', the showy Altair 'Luath', Girrahween 'Gloria', a brightly coloured Mayfair 'Collaroy' and Memoria Albertii. The miscellaneous orchids were Dendrobiums Jamesianum, Model 'June', Merlin, a lovely specimen Zeno with hundreds of flowers, the native *falcorostrum*, *Kingianum* and *speciosum*, Cypridiums Grace Darling, Lady Emily, Lady Kitty Laura (best of show), the yellow Noel Hardy, a spotted variety Rhine x Severn, Goldrush, yellow, and the spotted Utopia. Other orchids noticed were *Coelogyne cristata*, Vanda Gilbert Triboulet and Phaius Wallichii, various colourful Cattleyas included Poncarral 'June' and Lucy Begbie, both section winners, together with Crotons, Anthuriums and Ferns.

The Eastwood and District Orchid Circle exhibit consisted of a combined Glass House and Bush House; the various showy Cattleyas and Phalaenopsis varieties were displayed in the Glass House, the Cymbidiums and other or-

chids in the Bush House. The section devoted to Australian native orchids created considerable attention, the profusion and daintiness of the flowers being very appealing. This exhibit scored a total of 142.09 points and won Second Prize.

The St. George Orchid Society took Third Prize with an excellent arrangement, the exhibit being surmounted by two large colourful butterflies. This entry had a fine range of plants and flowers on display, but personally I thought the butterflies detracted from the effectiveness of the exhibits. The points scored totalled 117.73.

The Mosman Home Gardeners provided a very novel and distinct exhibit, a Cornucopia, or Horn of Plenty, which was filled with excellent Cymbidiums and miscellaneous varieties which spilled out and around the horn. The weakness of this exhibit was the lack of quantity of orchids, the quality of the plants shown was very high. This exhibit gained Fourth Prize with 117.30 points.

The Western Suburbs Orchid Society had a nicely arranged display, but spoiled the effectiveness of the exhibit by continuing, as in previous years, to group the like coloured Cymbidiums together. In the writer's opinion, this idea only serves to flatten the spectacle instead of the various colours highlighting and contrasting with each other. Perhaps next year we may see this idea abandoned and Western Suburbs placed with a higher point score than 102.27. Awarded Fifth Prize.

The Best Display by an Affiliated Society saw six keen and enthusiastic Societies enter into the spirit of this minor District Exhibit. Arranged in a line along the western wall of the Town Hall and built up from floor level, this section provided a wonderful spectacle, and was won by Sutherland Shire Orchid Society with a lovely balanced display of Cymbidiums and excellent miscellaneous orchids. The more outstanding Cymbidiums noted were Ispahan 'Mascot', Sussex 'Laelia Sasso', a fine arching spike of Midlothian 'Green sleeves', Balkis 'Luath', a pink Aldis Lamp, together with Sandpiper 'Dorothy', a colourful Remus and Girrahween 'Enid'. The miscellaneous varieties included the colourful Renanthera Brookie Chandler, L.C. Gaillard 'Belvedere', a rounded shapely flower, B.L.C.

Highlander, a pink flower with a dark lip, B.C. Grand Monarch, a large soft pink flower, the mauve Vanda Rothschildiana, F.C.C., Vanda Velthuis, bright pink, Dendrobiums Louis Bleriot, Superbiens and the showy, yellow Butterfly, Lycaste Skinneri, with five attractive flowers, together with various Cypripediums, Miltonias, Odontoglossums, etc., and finished with Crotons, Anthuriums and Ferns.

The Dos Pueblos Orchid Company in its first trade display at the Festival arranged a rock and moss wall together with a running waterfall as a background for some of the best new Cymbidiums we have seen for some time. Outstanding varieties included York 'Lady Slim', A.M., four spikes of large rounded shapely flowers, yellow petals and sepals, red lip, Tinsel 'Paisley', two arching spikes of attractive showy flowers, Samarkand, a lovely rounded blush white variety, Rosarita, a nicely shaped deep reddish pink with a red lip, York 'Le Cumbra', three spikes, a bold yellow flower with a bright red lip, together with Cooksbridge 'Orange' and several plants of the pink Judy. Excellent and distinct foliage plants completed a fine display. Awarded a Silver Medal by the Society's Judges.

This year the non-competitive display by Mr. J. Lawler was situated on the stage and provided a magnificent spectacle, the centre piece being a Bride attended by two Bridesmaids; this innovation created great interest. The more outstanding Cymbidiums were La Novia, pink, Atlantes, white, Monica Hargreaves, Cassandra 'Jennifer', a pink form of Cooksbridge, the pure white Cassandra 'Snow Queen', Princesse Astrid 'Dorothy', Virginia Leith, a blush white variety, the reddish pink Rosarita, York, a large showy yellow flower, an off-white Samarkand, Carisbrook 'Brick', Girrahweens 'Enid', 'Gloria' and 'Red Star', and the golden Nubian. This exhibit was embellished with various Cypripediums, Odontoglossums, Miltonias, etc., together with Philodendrons, Crotons, Anthuriums and Ferns. Granted a Special Recognition by the Society.

Mr. F. Slattery arranged an excellent trade exhibit, a fine range of varied and colourful Cymbidiums consisting of the popular Cygnus 'Opalescent', a large spike of Rio Rita 'Radiant' an arching spike of Cygnus 'Janet', a fine group of Miretta 'Matchless', A.D., the deep reddish pink Aldis Lamp 'Arncliffe', Rosanna 'Pinkie', Swallows 'Jill' and 'Desert Gold', Dorchester 'Jeanette', Istanbul 'Isobel' and pastel green Stonechat 'Elouera'. Various Van-

das, Dendrobiums and Cypripediums, together with Cordylines, Crotons, Anthuriums and Ferns, finished off the exhibit.

Mr. J. Bisset staged an attractive trade display on the floor level; the more prominent Cymbidiums noted were Swallow 'Magnolia', Bodmin Moor x Pixie, a large showy yellow green, Swallow 'Daffodil', Ramley, an attractive bold yellow green flower, the well-known Carigas 'Sorrento' and 'Julia', were used as a centre piece, Ispahan 'Mascot', two large spikes of Arabella 'Magnificent', together with Claudella, a deep green with a red marked lip. This exhibit was finished with various Calatheas, Philodendrons, Crotons, Anthuriums and Ferns.

The Qantas Display of cut flowers, flown in from overseas Orchid centres, included a magnificent group of multi-coloured Epidendrons and Terete Vandas from Hawaii; Vandas Sanderiana, Ellen Noa, Velthuis and Carol Hirano from Manilla; a group of unusual flowers including Arachnis Maggie Oei, Arandas Nancy, Deborah and Bertha Bragg, sent from Singapore Botanical Gardens; from Fiji various Cattleyas and white Phalaenopsis; Dendrobiums Caesar and Phalaenopsis 'Dixons', Vanda Roxburgii together with numerous Scorpion Orchids came from Colombo; and Cattleyas Tethys, Harrisoniae and Susan, together with a number of Cypripedium Maudiae from San Francisco. The unusual shapes and distinct colours made a very interesting display.

The Guessing Competition, a glass house containing orchids and foliage plants, was arranged in conjunction with the Lions Club of Sydney, which this year is raising funds for the assistance of the Royal Blind Society. At this time the final figures are not available, but it seems most likely that a sum in excess of £1,000 will be available for this deserving charity.

Mr. A. R. Persson contributed a very interesting and educational group showing orchids in the various stages of growth. Commencing with the seed, the exhibit showed the progressive developments through the flask stage, then into flats and community pots, subsequently through the various single pot sizes until the flowering stage was reached.

Owing to the large number of classes it is not possible to mention all the prize winners, the following notes being the writer's impressions of the First Prize Winning Exhibits:

Grand Champion Cymbidium — Dorchester 'Jeanette'. H. Pearson. A large vigorous plant

with an arching spike of fourteen truly magnificent flowers. Petals and sepals white with a faint pink suffusion, the lip white with reddish spotting and a yellow marking in the throat. Winner of the Armstrong & Brown (England) Trophy. Awarded a First Class Certificate by the Society's Judges.

Reserve Champion Cymbidium — Balkis 'Luath'. S. Cooke. A large plant with a semi-erect spike of nine shapely rounded flowers. Petals and sepals white, the lip white spotted with red and suffused with pink.

Best Red Cymbidium — Robin Redbreast 'Lilyvon'. A. Chalmers. A medium sized plant carried an arching spike of twelve flowers and buds just opening. Petals and sepals an intense reddish shade, the white lip heavily flushed and spotted with red. Reasonable shape. Granted an Award of Distinction for Colour.

Best Green Cymbidium — Miretta 'Matchless'. F. Slattery. A strong plant with three spikes totalling twenty-two large closely set flowers. Petals and sepals a deep clear green, the cream lip heavily marked with red. Granted an Award of Distinction for Colour.

Best Yellow Cymbidium — President Wilson 'Lemon'. K. Rorie. A large plant with a small semi-erect spike of six spidery flowers. Petals, sepals and lip a good deep yellow shade.

Best Specimen Cymbidium — Cooksbridge 'Orange'. Dos Pueblos Orchid Company. A large vigorous plant with eight strong semi-erect spikes with dozens of huge open flowers. Petals and sepals an unusual buff shade, the lip heavily marked with red.

Best Other Specimen — Cattleya Lucy Begbie. Dr. Kaw. A well grown plant with eight medium sized attractive flowers. Petals and sepals white, the lip white with yellow in the throat and flushed with purple at the tip. Lovely display.

Group of Six Cymbidiums — S. Cooke. A magnificent group of well grown and well presented plants which, with the profusion of spikes and flowers, created a marvellous display. As was the case last year this group was, in the writer's opinion, not in keeping with the requirements of the schedule which stipulated distinct colours. Obviously an off-white Swallow 'Soulangeana' and a white Princesse Astrid 'Dorothy' are not distinct colours and should disqualify the group. The following flowers comprised the prize winning group: Princesse Astrid 'Dorothy', four spikes of white flowers, Istanbul 'Isobel', two spikes of soft pink shapely flowers, Cygnus 'Opalescent', two

spikes of large pastel green flowers, Girrahween 'Gloria', five strong spikes of yellow flowers, Girrahween 'Enid', five spikes of shapely flowers, and Swallow 'Soulangeana', four spikes of off-white flowers.

Group of Two Cymbidiums — H. Pearson. Balkis 'Luath', a strong plant, carried a spike of six large rounded shapely flowers. Petals and sepals white flushed with pink, the lip flushed pink and spotted with red, also Dorchester 'Jeanette', the Champion of the Festival.

Group of Three Cymbidiums for Colour — S. Cooke. A fine group of distinct colours included Gottianum 'Beryl Jean', a semi-arching spike of seven pure white flowers, Carisbrook 'Brick', a semi-arching spike of nine deep red flowers and Midlothian 'Greensleeves', a pendulous spike of twelve clear green, red lipped flowers.

Group of Four Decorative Cymbidiums — S. Cooke. A display of large freely flowered plants which made a magnificent spectacle, comprised of the following varieties: Ispahan 'Mascot', seven spikes of pastel green flowers, Altair 'Luath', three spikes of colourful and showy flowers, Girrahween 'Zenzi', five spikes of yellowish, red lipped flowers, and the well-known Cygnus 'Janet' with four large arching spikes.

Best Cymbidium Exhibited by a Novice — Balkis 'Luath'. J. Montgomery. An improving plant with a nice spike of eight shapely flowers. Petals and sepals white, the white lip spotted with red and flushed with pink. Winner of the Warra Warra Cup for 1958.

Best Coloured Cymbidium Exhibited by a Novice — Carisbrook 'Florence'. C. Smith. A strong plant with a spike of eight large showy flowers. Petals and sepals a rich red brown shade, the cream lip heavily marked with red.

Best Cypripedium — Lady Kitty Laura. L. Sasso. A lovely balanced and rounded flower. The dorsal white flushed with green and heavily marked with reddish brown spots, the broad petals a red brown shade, the pouch brownish and the ventral green.

Best Cattleya — Cattleya Poncarral 'June'. L. Sasso. A medium sized plant carried two large rounded flowers, petals and sepals a pale mauve shade, the lip a deep reddish purple with gold markings in the throat. Excellent shape and texture.

Best Dendrobium — Lady Constance 'Cosslette'. H. Mills. A smallish plant with four large rounded flowers. Petals and sepals an intense reddish purple shade, the lip darker.



THE NORTH SHORE ORCHID SOCIETY

First Prize in Best District Exhibit, Orchid Society of N.S.W. Festival 1958. 174.97 points



(B. C. DÉESSE x C. MEMORIA ROSEMARY)
'WONDABAI'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner L. Giles. This flower was 5½ inches across. The petals were lavender pink in colour, with white sepals. The labellum was lavender coloured with yellow throat. Reg. No. 372.



CATTLEYA BOB BETTS 'BEXLEY'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner F. Slattery. The plant carried two flowers 6 inches in size. The flower was white except for yellow in the throat. Reg. No. 374.



THE EASTWOOD AND DISTRICT ORCHID CIRCLE

Second Prize in Best District Exhibit, Orchid Society of N.S.W. Festival 1958. 142.09 points



DENDROBIUM THRYSIFLORUM

grown plant in 1957 by O.S. of N.S.W. Ltd, Reg. No. 366. Cultural Certificate awarded to H. R. Crutch for this well



DENDROBIUM MOUSMÉE

Indian importation of unusual yellow and mauve colouring. Only three or four plants seen so far in Sydney. Bushhouse culture best for this orchid.

Best Vanda — Rothschildiana. B. Bonnyman. An erect spike of ten large rounded flowers. Petals and sepals a deep mauve overlaid with a darker mauve tessellation, the lip violet. A superb flower with overlapping segments and excellent shape. Granted a First Class Certificate.

Best Australian Native Orchid — Dendrobium Superbiens. H. Mills. A well grown plant, carried two spikes with dozens of smallish showy flowers. Petals, sepals and lip a deep reddish pink shade.

Best Other Orchid — Phalaenopsis Sachesis. A. R. Persson. A lovely plant with two spikes totalling thirteen large shapely flowers. Petals and sepals white, the white lip marked with yellow and brown. Granted a Highly Commended Certificate by the Judging Panel.

Best Cymbidium Seedling — Australian — Elouera. Mrs. G. Tant. A semi-erect spike of seven pleasing flowers. Petals and sepals white with a soft pink suffusion, the lip heavily marked with red. Fair shape.

Best Cymbidium Seedling for Colour — Australian—Charm x Sparta 'Etna'. A. Watkins. A small plant with an arching spike of fourteen medium sized flowers. Petals and sepals a deep reddish pink shade, the lip white with red markings.

Best Imported Cymbidium Seedling — Cooksbridge. A. R. Begg. A large plant with two semi-erect spikes totalling fifteen nicely shaped flowers. Petals and sepals a tawny shade overlaid with a pink suffusion, the lip cream with reddish markings.

Best Group of Orchids and Foliage Plants Displayed in an Area 6ft. x 6ft. — Mrs. K. E. Thompson. A nicely presented display which was granted a Silver Medal by the Society's Judges. Outstanding Cymbidiums included the bright pink Edzell 'Elizabeth', Ispahan 'Mascot', Balkis 'Luath', the unusual Gossoon 'Ariadne', Balkis 'Vauluse', white with a pink flushed lip, Dorchester 'Woolaware' and Altair 'Luath'. The various Cypripediums exhibited were Eurystomum 'Rex', Smolensk, A.M., Anita 'Compactum', a small shapely green flower, Loretta Louise, and the dainty Fairie-anum, together with the mauve Vanda Honolulu, several Dendrobium Falcrostrum and Kingianum, a lovely pink Cattleya Loddigesii and various Phalaenopses. The exhibit was nicely embellished with various colourful foliage plants, Anthuriums and Ferns.

—48 Waremba St., Abbotsford, N.S.W.

• *EASTERN SUBURBS ORCHID SOCIETY*:—The ninth Annual Show of the Eastern Suburbs Orchid Society was held in the Grahame Memorial Hall, Charing Cross, on Friday, 29th and Saturday, 30th August, 1958.

This year's Show was held one week later in the season than last year and a greater number of later flowering varieties of Cymbidium orchids were exhibited, including such favourites as Balkis 'Luath', Cygnus 'Opalescence', Ispahan 'Mascot', Princesse Astrid 'Dorothy' and Sussex 'Laelia Sasso'.

The Champion Cymbidium of the Show was a very nicely flowered Balkis 'Luath' exhibited by Mr. S. G. Cooke, of the St. George Orchid Society. Mr. Cooke also exhibited the Sussex 'Laelia Sasso' which was chosen as Reserve Champion. Mr. Harold Crutch, also of the St. George Orchid Society, exhibited Faust 'Flambeau' judged to be the best coloured Cymbidium.

The Show was well supported by the public, attendance being around the level of last year. Although it was held one week later in the season it is open to doubt whether there was any appreciable increase over last year in the number of plants at their peak for staging at the Show. There is one thing, however, which all growers must at some time face, i.e., the disappointment at not having a favourite plant at its best for the Show. The vagaries of the seasons will ever be unpredictable.

The members most successful with their exhibits were Mr. R. Dart in the two best Cymbidiums class and as the hybridiser of the best Australian seedling, Mr. A. Wallick with his best Australian hybridised seedling and his 'Woodpigeon' best coloured Cymbidium, and Mr. H. Bawden, who was awarded first and second prizes in the Best Decorative Section. In the Novice Members' Section awards went to Mr. W. S. Hall for the best Cymbidium, Mr. P. D. Jones for the best coloured Cymbidium and Mr. N. Chaney for his Cypripedium 'Nena'. Mrs. Powell won the best decorative Cymbidium section for Novice members and was also awarded the Mr. and Mrs. C. H. Russell Cup for the best Cymbidium exhibited by a Novice Lady Member. Mrs. T. R. Cole won the award for a shoulder spray. Mr. J. L. Mullan had minor successes in both the Open and Members' sections.—G.C.H.

• Secretaries are reminded that copy for the March issue of the A.O.R. must be received by 24th January, 1959.—H.J.L.

Oncidiums and Their Allies

W. W. G. MOIR

Contd. A.O.R. Sept. 1958.

Sub-section C covers larger growing plants with very heavy fleshy leaves that are referred to by people in their native habitat as goat ears or donkey ears, depending on size of species leaves. As a group these are difficult oncidiums to grow because the watering must be most judicious, especially from the resting period through to the making of their new growths. There are some very magnificent flower sprays among these. *Lanceanum*, *bicallosum* and *guttatum* (*luridum*) are really beautiful. *Lanceanum* has a red brown to maroon mottling over a greenish tan base for the sepals and petals, while its labellum is purple (variations of this are white near base out to deep purple). This plant likes wetter conditions than the others and somewhat more shade. Maybe the reason it does not do so well around Sydney is for these reasons. It is, however, very susceptible to a big blackspotting of the leaves that makes the plant look terrible. This can be corrected by the use of zerlate or fermate used as a thick "white wash" on the areas and kept this way until the new clean growths have fully appeared and then remove the old diseased parts. The leaves of *lanceanum* are silvery green with maroon spots.

Bicallosum has large yellow flowers with a few brown spots. This plant has yellow green leaves and the branching flower spike stands about two to three feet above the plant. This requires drier conditions than *lanceanum*.

Guttatum varies considerably in size of plant, flower and length of spike. This is because taxonomists have placed three or four distinctively different yet quite similar species together. The *luridum* of the West Indies (Florida down to northern South America) are huge plants with leaves measuring up to two and one-half feet and six inches across, with flower spikes up to fifteen feet in length very much branched. It has flowers from butter yellow through to golden and red bronze that are three inches across when growing well. The *guttatums*, which are Mexican in origin, are a combination of several similar species, which may originally all have been one species. The leaves are never as big as *luridum* nor are the spikes and flowers; but what they lack in size they make up for in pastel shades of green and rose. I have a series of magnified colour slides of the central crest

of these various forms and one can see the structural differences between *guttatums* and *luridums*. Oncidiums are one of the few orchids that have spectacular crest formations near the base of the labellum and wings on the side of the column at or below the pollinia cap. (It is by studying these that one separates species when flowers look similar in most other respects.)

Kranzlin made the same glaring mistake that has persisted through orchid literature in regard to the species *Oncidium splendidum*. This most wonderful species has been called a variety of *tigrinum* and has nothing really in common with *tigrinum* other than it is an oncidium. This species belongs in the same group with those just discussed. Mr. Calaway Dodson has shown by chromosome counts that it is not in the same group with *tigrinum*. The leaves of *splendidum* are short, very heavy, deep red bronze, about a foot long and two inches wide at the most. Its spikes are branched and stand about two to three feet high. Each flower is about three and one-half inches x two inches in size. The best have perfectly flat labellums that are full rounded skirts. The size of flower is quite similar to *tigrinum*, but this latter species has no texture like the former and has leaves that are thin and like the altissima group. *Splendidum* must be kept dry.

The hybrid between *lanceanum* and *splendidum*, known as Dr. Schragen, is one of the finest yet produced. It has larger flowers than either parent, the lip size and colour are like *splendidum* and the sepals and petals are like *splendidum* in shape but deep red brown in colour and as if shellacked, for it shines. Numerous seedlings are available from several sources, but some may be made with *splendidums* that have a bad habit of rolling their labellum back into a roll.

The hybrid between *luridum* and *lanceanum* (a natural hybrid) known as *haematochilum* has a beautiful red labellum. There is quite a difference of opinion about the parents; some claim it is a cross between *carthaginense* and *lanceanum* and others that it is *guttatum* and *carthaginense*, but I believe the first given above of *luridum* and *lanceanum* is much more likely, although the different sizes of flowers in the offspring might indicate two hybrids being put to-

gether. I have never had the opportunity to study them closely.

Carthaginense, or "Pink Lace", as it is called by the people of Panama, is a small flowered species, but most beautiful, with light pink through to blood red flowers on long sprays. It is easier to grow than the *luridums* for it is a bit opener at the base and allows good circulation of air to keep it dried out. This characteristic is one of the valuable points to look for in handling these heavy leaved species.

Stramineum, or "Goat Ears" is a smaller growing plant with deep purplish bronze leaves and sprays of small, eggshell or off-white coloured flowers. It should be a wonderful parent to bring compactness to the offspring and less space needed for a plant in the greenhouse or garden. I am not familiar with the rest that Kranzlin places in this section: *chrysops*, *cavendishianum*, *kymatoides*, *retemeyerianum*, *pumilum*, *nanum* and *saltator*. The other heavy leaved species are scattered through other sections, the reason for which I have not determined as yet because I do not read German or Latin. However, I do believe Australian growers would enjoy all of the ones mentioned and they should give you all a challenge on how to grow them as near to their natural ways as possible, which is generally dry with good aeration and drainage and quite a variation in temperature.

Section 3—*Barbata*

This grouping of Mexican and Brazilian oncidids is not too well known by the writer, but the few I have are exceedingly fine to have. Those whose flower spikes do not extend much beyond the leaves of the compact small plant are delightful pot plants and look like a bouquet of flowers. *Longipes* and *biflorum* are quite similar and well worth a try. I do not know the others. Those with flower scapes standing a foot or more above compact small plants are *barbatum*, *trichodes* and *micropogon* that have what appear to be one yellow flower superimposed on a brown and yellow flower. The first two are quite similar with the second having a larger labellum so that the two petals and labellum are all the same in size with a striking yellow colour. These are compact, small growing plants and have a delightful scent, not quite as strong as *lanceanum*, which permeates the atmosphere for yards around. *Microchilum* and *wentworthianum* have much longer scapes with the former having rather minute dark bronze flowers. There are many more in this group, but I have not grown them.

Section 4—*Cucullata*

This is an unknown group to the writer and are mostly from Ecuador and Colombia. They probably are cool growing types since *Oncidium phalaenopsis* is among them. This is one of the spectacular species of Ecuador.

Section 5—*Cruciata*

This is divided into large and small flowered groups. Spectacular species like *sarcodes*, *marshallianum*, *gardneri*, *crispum* and *forbesii* are in the group of larger flowers. These should or are probably doing very well in Sydney and environs and should do well in many parts of Australia. In Hawaii these are not very easy to grow in the hotter localities. There is one grower here that keeps them on fibre slabs and a fogging system overhead to keep the humidity up and he grows these and flowers them well. Many other species in the larger flowered group are listed, but I have yet to see them. The ones mentioned are usually medium-sized plants, compact in growth, with medium bulbs and leaves of the thinner type. No doubt these need much food to keep them going if grown in much sunlight—a principle true for all orchids.

The smaller flowered group are numerous and practically unknown to me. They have heavy leaved as well as thin leaved plants among them. I am barely familiar with *pubes*, *echinatum*, *longicornii* (*unicorne*) and *warscewiczii*. *Unicorne* I have used in hybridizing with the "variegata" group to make most unusual branching sprays of sparkling flowers (Onc. — Sparkle — *tetrapetalum* x *unicorne*) which are rather easy to grow. All these plants take up little room.

Section 6—*Raniferum*

(A group of Brazilian and Colombian species not seen by the writer.)

Section 7—*Varicosa*

This group is divided into those that climb as a vine and those that are not climbers. The species *globuliferum* is fascinating, twisting itself through branches of trees and shrubs, producing what appears to be a flower spike which produces nodes every few inches that grow into plants that root to the branches. The large single yellow flowers like *varicosum* in appearance are found at the nodes before the plant is produced. The other two species in this climbing sub-section have not been seen, but one is described as having a raceme of flowers and not just one or two flowers (*Oncidium sancti pauli*).

The non-climbers are about a dozen in number, but I only know *flexuosum*, *varicosum* and

crisagalli. I do not believe that much should be written about the first two for they are so well known and should be in every collection for their spectacular display. *Flexuosum* is a lover of warmer conditions than *varicosum* and flowers over a longer period. It also makes an excellent parent with other miniatures, while *varicosum* imparts its excellent skirted labellum to all hybrids and when used with a warmer growing parent like *blanchettii* (Onc. Brazil) makes a delightful hybrid mid-way in growth between the large growing parent and the small growing parent *varicosum*. *Crisagalli* is a miniature plant (one to three inches) whose flowers are almost as big as the plant. It is most difficult to grow in "captivity" for it is often found hanging on the smallest twigs of high trees or even on the surface of leaves that hang on for a long time. They do not often survive transportation, quarantine and fumigation.

Section 8—*Poikilophylla*

This group has four large flowered and one small in it according to Kranzlin. *Papilio* and *kramerianum* are well known—the first with flat stems near the flower and the other with perfectly round ones. These are all single flowered species, that is, flowers continue to come out one at a time from a centre at the end of long spikes for several years. The *papilio majus* I have flowers continuously in spite of four to six pods on it at all times. Normally this species is hard to seed, but I was fortunate in having a plant forced on me while in the West Indies and it turned out to be not only the *majus* form but a wonderful seeder. Crosses with *Brassias*, *Miltonias* and other *Oncidium*s work well. I have yet to see *sanderæ* plants or to have my *versteegianum* flower. It grows like *Oncidium lanceanum* and could easily be taken for that. *Limninghei* is a miniature and creeps along with each leaf flat to the tree or fibre and covering the next growth. The flowers are on foot long spikes and about one and a half inches across. The red spotted olive green leaves are beautiful. These should be grown for they are spectacular. They must all be kept on the dryish side.

Section 9—*Heterantha*

Here is a group of some twenty-eight species that I know practically nothing about. One member, *heteranthum*, is beautiful with its single small flower at the end of each of many branches on the spike. The rest of the spike is covered with a lacework of substitute thread-like flowers. I have had about a dozen of these and they have all died after finishing their first

blooming. Maybe this is a characteristic of the plant for it is very hard to find and the plants are never very large. I do not know if others of this section act the same.

Section 10—*Ornithorhyncha*

Of the thirty-eight species listed I know but two — *cheiroporum* and *ornithorhynchum*. They are both beautiful for their compact masses of small flowers that are twisted and turned in all directions so one is not certain which is the front of the flower until closely examining it. The first is a miniature in growth with compact roundish golf ball sized pseudo-bulbs and a single leaf at the end that has foot-long branching spikes of myriads of yellow flowers about half an inch to three-quarters of an inch in length. Hybrids are difficult to make and grow. It grows at five to six thousand feet elevation in Panama, yet we grow it well at "Lipolani" if kept in cool and windy areas and not too much sunshine. In its native home it completely envelopes the branches of trees right out to the ends overhanging precipices where clouds drift through them and winds blow up to forty or fifty miles an hour. What a sight to see when in bloom!

Ornithorhynchum, a Mexican and Guatemalan species, is pink instead of the normal yellow of *oncidiums*. It has bulbs up to the size of a grapefruit and, like *cheiroporum*, produces more than one spike per pseudo-bulb when blooming. The large bulb forms may have as many as five to six sprays three feet long on them with hundreds of flowers open at one time. The perfume arising from these flowers permeates the air for yards around. In a closed area the perfume is very heavy. This species is rather easy to grow in contrast to *cheiroporum* that does best on slabs of fibre or on trees. Favourite trees for many *oncidiums* are *plumeria* (frangipani), *crescentia* and *callandria*. The *crescentia* or calabash tree has corky rough bark that is wonderful for those orchids that like to have their roots exposed to the air.

A remarkable hybrid of *ornithorhynchum* and *cabagrae* (Onc. *Ornithograe*) with deep purple and white flowers has acquired the characteristics of both parents of having many spikes per bulb and the length of the *cabagrae* spike and its branches. In this particular case *Onc. cabagrae purpureum* was used; a purple and white or the alba form of a brown and yellow *oncidium*. *Ornithograe* in bloom is a real sight and delight to grow for it is so easy to handle.

I would like to get acquainted with more of the species of this group if they are at all like

these two. The names of them are not even seen in books other than a monograph like Kranzlin's.

Section 11—*Concoloria*

This has both semi-terrestrial as well as epiphytic species. One semi-terrestrial we collected in Honduras—*brachyandrum*—is not very easy to grow in warmer climes. It was collected in thick shrubbery at about four thousand feet of elevation near Zamorana on the way up to Oyucca. Two species with very similar shaped flowers to *brachyandrum* are *hyphaematicum* and *xanthodon*. Both come from Ecuador, although the last mentioned is not placed by Kranzlin in this group but over with the *Cyrtorchilums*. The "real" species of this group is the one that gives it its name—*concolor*. All of these flowers seem much longer than broad. I have seen flowers of *concolor* and have used pollen from Slade in many crosses. I know little about growing *concolor*, but imagine it would be difficult to grow here as are *brachyandrum* and *hyphaematicum* but should do well around Sydney.

Section 12—*Stellata*

These have stiff, branching and many flowered spikes of star-like flowers. *Hastatum* probably is one of the most satisfactory to grow and is in full bloom in March. It often goes under a variety name of *stelligerum*. It is a slightly smaller form of flower but very similar to *maculatum*, a most striking oncid. *Hastatum* is far easier to grow than *maculatum*. *Leucochilum*, a brown, green and white flower on longer spikes is really a must for a collection. The hybrid with *altissimum* (Onc. Splinter) is also fine. *Ochmatochilum* is one of the huge growers with foot-long bulbs weighing up to a couple of pounds in weight. Its flowers are light brown and white on an open branching spray eight to ten feet in length, with each side branch three feet to four feet long. It is not an easy one to grow, although when bedded down and kept well drained in light shade it does fairly well. *Panduriforme*, although not listed by Kranzlin, is quite similar but somewhat susceptible to virus diseases. An unknown species from Ecuador that I have, with lavender, brown and white flowers on a similar spike should probably go in this section. It is really beautiful but, like the other huge ones, takes up a three to four feet in diameter area to grow in. There are nine others in this group I have not seen so cannot say whether they favour the real star-shaped flowers of *hastatum* and *maculatum* or the large plant species, but all should

have large bulbs if they are like either group.

Section 13—*Pulvinata*

Of the six listed, I am familiar with four—*robustissimum*, *pulvinatum*, *divaricatum* and *harrisonianum*. The last two I can strongly recommend. *Divaricatum* has an exceptional crest like a pompom, while *harrisonianum*, a rather small plant, has long branching spikes of many small flowers. These are not too difficult to grow except to be sure drainage is good. You should, therefore, grow them on a slab of fibre to let water run off freely since both have such compact bulb formation.

Section 14—*Oblongata*

This group of twenty-one species (Kranzlin) has three very outstanding species which I grow and greatly appreciate. *Ampliatum*, of the heavy leaved type with its large round but somewhat flat bulbs, must be kept during the flowering period from having water or rain on its flowers or they will get blackspotted and fall off. The *majus* form is somewhat opener in the arrangement of flowers on the branching spike. These sprays have flowers for a two months' period and are spectacular. *Blanchettii*, without any brown in its greenish yellow flowers, on a long erect spike branching near the end, is an excellent species to have. Crosses with *Brassia* and *Odontoglossums* are growing nicely. However, *oblongatum* is an equally beautiful species with long branching spikes arching out from the plant. It also has very little, if any, colour other than canary yellow. It, like *blanchettii*, has such square looking flowers with large labellums that one cannot help but love them. I would like to see more of this group of oncids.

Section 15—*Tigrina*

This small group of four species is strictly foreign to me except for that species giving the group its name—*tigrinum*. It is even more beautiful than *varicosum* for it is larger and more spectacular on the branching spike. It is a much bigger grower also, but a little difficult to grow here. It should do well under Sydney conditions.

Section 16—*Excavata*

Again out of sixteen species I know but two and they are "jewels". *Obryzatum*, which is just finishing its first set of flowers on long spikes, is a most striking sight with several spikes per plant each much branched and about six feet long. The one inch, longer than wide, flowers are squarish in shape and are pure yellow except for one small spot of brown in the centre. The spikes, if left on the plant, will

send out new but shorter branches and give a light flowering a few weeks after the first have finished. It has been most difficult to use this in hybridising and, therefore, a great loss, for the second flowering characteristic would be fine to have. The Variegata and Barbata groups also have this characteristic and so does *Miltonia warscewiczii*. *Polyadenium* is a striking species with somewhat square cut ends to sepals and petals that are, therefore, wider at the end than in towards the middle of these parts. I have also found it impossible to cross up to this point; pods are on the Variegata group with *obryzatum*, but may be empty at harvest. Both of these species are easy to grow and are medium to small in size. Both come from higher elevations, but do well here at six hundred feet when kept in a breezy spot where evaporation of water keeps them cool while still growing in the sunshine. This formation of localized climatic conditions for certain species of all orchids has made it possible to grow them at "Lipolani". We have microclimates that make a difference of twenty to thirty degrees, at the same time, in parts of the garden that are only a few feet apart. *Obryzatum* was collected from high trees at high elevations in Panama, although Kranzlin lists it from Ecuador and Peru.

Section 17—*Verrucituberculata*

Again another section I know nothing about but which looks interesting with its eight species, mostly from North-western South America.

Section 18—*Altissima*

Sixty-two species are grouped here by Kranzlin. The ten I know and grow here have differences that are at times very difficult to see unless they are closely examined. There are others not listed that belong in this group—one being *isthmii*, one of the finest of the group. *Incurvum* is placed in this group, but seems out of place to me. It is pink and twisted in shape and rather a difficult one to grow. Most all the species of this group are warm growers and love the change of weather from the dry season to wet season in their native habitat—each period about six months in duration and really wet or dry. Here they are kept wet all the time and thrive.

It is most difficult to separate *altissimum* from *sphacelatum*, but wings on the column and the papillia on the crest settle the matter. Among so many of this group you have a real rolled "fiddle waist" in the middle of the labelum in contrast to the broader and flatter group. *Baueri* and *isthmii* have both very much of a

"fiddle waist" with more brown and smaller size to *baueri* and more beauty and yellow to *isthmii*. Both carry flowers crowded together in two lines back to back along short, six to eight inch long, branches on six to eight foot long spikes that grow straight up until their weight topples them.

Sphacelatum and *altissimum* are two that are nearest together in appearance but the first flowers together on the plant and in a short period in the spring, while the second may send up spikes over a six-month period. *Panamensis* and *confusum* also have long flower spikes somewhat like *baueri* and *isthmii*, but with varying length branches. *Altissimum* and *sphacelatum* both have arching flower spikes with branches graded from long to short as one goes out the spike. All four of these have flat broad labellums. The first two mentioned are smaller flowers and sparse on the spikes, and the latter two larger and many flowered. *Wydleri* is similar but has a many branched spike up to twenty feet in length, with dark brown flowers with a yellow lip that are twice the size of the others.

Ansiferum and *stenotis*, along with *lanksteri* and probably others, have distinctive flat bulbs in contrast to conical ones and, on the whole, much broader leaves very much resembling *Miltonia warscewiczii*. These flowers are not very large, but are beautiful in their much branched, scattered flower array.

Cabagrae is quite different to all these and has bulbs that remind you of the *varicosa* group, with deep green mottling on a long and slender ribbed bulb. It has many spikes per bulb, in fact, one from each leaf on each side out to even one on the end. It is a very fine species of smaller flowers, which are not as small as the *parviflorum*, that grows very much like it.

Citrinum is one I have no strong recommendations for, but probably when grown under right conditions might do well. This very large group of *altissima* types may be a collection of hybrids, but only time and study will determine the correctness of this. They make spectacular specimen plants, as the one *sphacelatum* plant grown undivided from one bulb in 1936 to date, which now has close to four hundred sprays on it that are four to seven feet long and will have in the neighbourhood of forty thousand flowers when it is in full bloom in May or June. These start coming on the first of November, but do not flower until June sometimes.

A large group of *Oncidium*s that Kranzlin calls *Cyrtochilums* has some magnificent species

among them. These often have rather broad leaves or very long ones with distinctive ribs on them. Maybe somewhere in the twenty-five pages of introduction to the eight genera covered by the monograph there is a detailed discussion of why all these were placed as they were. It is all in German, a language I am not able to read, but I guess he divides the *Cyrtorchilum* into three groups, two with small flowers that are or were respectively *Oncidium*s and *Odontoglossum*s, and the third group of large flowers which are all *Oncidium*s.

This *Cyrtorchilum* group of large flowers has among it the remarkable species we know and call *Oncidium macranthum*, *anthocrene* (which we also know as *powellii*), *serratum*, *monachicum* and *lamelligerum*. I must admit I do not recognize a name among the fifty-eight listed for the two groups of small flowered *Cyrtorchilum*s.

The large flowered *oncidiums* mentioned above have been used very little in hybridizing, but will more and more from now on. *Anthoceren*, both under that name and under *powellii*, gives some remarkable offspring. A *Miltonidium* Lustre, using it as the female parent and *M. warszewiczii Weltoni* as male, makes a colourful spray of gold and brown flowers of about the same size as the female parent—about two inches each way.

Please remember *Oncidium*s in general are easy to grow and are terrific feeders. They have their rest periods, and some must be kept rather dry, while others are lovers of water, and some like their roots exposed and need very little media to grow in. They are as susceptible to chewing and sucking insects and snails as any other orchid and need spraying to keep them off. However, they require much less care than most orchids. This goes for all the relatives of the *Oncidium*, with a few exceptions and always remembering whether you are trying to grow them out of their environmental requirements. I am sure you will enjoy them and I believe I have given you enough of a cross-section to choose a few in any group that may suit your locality. Some species are hard to get and others are easy. However, seedlings of very promising and interesting hybrids are readily available here in Honolulu or on the mainland, or from sources in their native habitat, which I can direct you to if you desire. Hope this has not been too long and that your Editor is not about to condemn me for it. He asked for something and here it is, the way I see it. Aloha!

—P.O. Box 2298, Honolulu, T.H.

• *HORNSBY KU-RING-GAI ORCHID SOCIETY*:—The Mayor of Ku-ring-gai, Ald. A. N. Campbell, officially opened the Hornsby-Ku-ring-gai Orchid Society's Annual Show, held at the Killara Memorial Hall on August 15th and 16th.

The Show, the first of the season, attracted a record number of entries, and the quality of the exhibits has not been surpassed at any previous Show. One of the main attractions was a display of magnificent American seedlings, which were flowering for the first time in Australia.

Captain Anderson's Carew Castle 'Dover Heights' received the award for the Champion Cymbidium of the Show, and results in other sections were as follows:

Open Section:

Reserve Champion, S. G. Cooke's Swallow 'Lemon Beauty'. Best Export Cymbidium, S. G. Cooke's Jason 'Mabel Thorpe'. Best Specimen Plant, T. J. Brown 1st, S. G. Cooke 2nd. Best Cymbidium for Colour, D. Hall 1st. Best of Three Cymbidiums, R. Hall 1st, S. G. Cooke 2nd. Best Group of Three Cymbidiums for Colour, D. Hall 1st, J. Preece 2nd. Best Group of Four Decoratives, S. G. Cooke 1st, D. Lancely 2nd. Best *Cypripedium*, R. Trenerry. Best *Cattleya*, Lou Sasso. Best Orchid not otherwise specified, Mrs. A. Spurway.

Members' Section:

Champion Cymbidium, Mrs. J. Taylor 1st, Mrs. J. Taylor 2nd. Best Cymbidium for Colour, Green, D. W. Hardie; Yellow, D. W. Hardie. Other Colour, R. Hall. Group of Two Cymbidiums, Mrs. J. Taylor 1st, Mrs. F. Spurway 2nd. Group of Three Decorative Cymbidiums, J. Preece 1st, L. Matthews 2nd. Best Orchid not otherwise specified, R. G. Davey. Display of Foliage Plants, Ferns and Orchids, Mrs. J. Taylor and J. Preece 1st, D. W. Hardie 2nd.

Novice Members:

Best Cymbidium, Mrs. Webeck 1st, Mrs. D. W. Hardie 2nd. Best Cymbidium for Colour, Green, Mrs. D. W. Hardie; Yellow, A. G. Gorsky. Other Colour, A. G. Gorsky. Best Decorative Cymbidium, A. G. Gorsky 1st; Mrs. D. W. Hardie 2nd. Best Orchid other than Cymbidium, A. G. Gorsky.—R. J. Jamieson, Hon. Sec.

• Orchid enthusiasts remembering the recent illness of Mr. Frank Slattery, will be shocked to hear of the illness of Mrs. Slattery, who is now in hospital.

Orchid Culture in Summer

H. J. LAWLER

• The months of December, January and February in Sydney are considered to be most trying for orchid enthusiasts. Temperatures are often over the one hundred degrees mark; the city is often surrounded by bush fires; often a boisterous southerly wind accompanied by hail and storm causes us to experience the four seasons in one day. This freakish combination of climatic conditions causes growers to wonder whether their beloved plants will survive. Yet survive they do, and amazingly enough seem to revel in the steamy February atmosphere. This may not be hard to realise when we usually refer to this heat as "Jungle heat", whilst mopping the perspiration from behind our collars, which are supposed to denote modern civilisation. I cannot imagine orchid hunters hacking their way through a jungle attired in a conventional navy blue suit and red tie, and nor can orchids imagine why man wears a collar and tie in conditions fit for growing orchids.

As we are all orchid growers perhaps it is better that we suffer the heat rather than our plants, which are said to grow better in Sydney than any other part of the world.

CYMBIDIUMS

If the instructions have been carefully followed from the September issue of the A.O.R., our Cymbidiums should be thriving with the new growths well advanced and by this time ready to devour our summer feeding programme.

All plants should be growing fast and at this stage have used all the fowl manure that was included in our original compost. If not in November then now is the time to give each plant a topping of half an inch all over the tops of the compost with fresh poultry manure. Cover the manure with fresh compost to prevent this fertiliser from caking. If you have been heavily watering the plants each day then the compost should have settled down into the pot to permit the extra nourishment to be added.

Extra shading should have now been applied to the top of your bush house. The sun, during these next three months, can burn your plants. One very hot burning day can cause extensive burn damage to Cymbidiums in bush houses. Make sure that the ventilation *beneath* your benches is adequate. Do not neglect to spray

your plants each month, preferably at evening, with our all purpose spray. In four gallons of water, mix four teaspoons of E605 (Folidol), four teaspoons of Albarol, one ounce of Zineb and a tablespoon of detergent. Do not forget to use a mask whilst spraying and thoroughly wash your hands before smoking a cigarette, etc.

Seedlings can be treated with the manure as well as the adult plants. Do not manure a plant which has a number of back bulbs adhering to the front portion of the plant. The dead roots beneath these back bulbs are rotten and cannot make use of the manures. Most black rot diseases commence in the root system of the plant and back bulbs therefore can cause serious trouble to the front section of the plant through heavy manuring being applied to their useless dead roots. Our show bench Cymbidiums should not be carrying unnecessary back bulbs if they have been repotted this season.

Many "post mortems" are held during the latter part of January and early February by growers looking for spikes. Look at the base of your new growth where the new spike should appear. Some are between the first or second pair of leaves. Sometimes just the swelling at the base of the new growth is enough to indicate the plant will definitely flower for you.

Even at this early period of the year it is possible to remove the plants which have spikes, to a position in the bush house which has been reserved to force blooms to flower much earlier than usual. Buy some glazing bars and nail them to the roof of your bush house where the spikes will face north, and then lightly paint some glass and slide it into the glazing bars. Make sure that you do not create glass house conditions. All you are trying to do is to force the spike to grow quicker. Use white paint applied with a brush and stipple the paint with an old sock, rolled into a ball, before it dries. As the heat from the sun wanes then some of the ti-tree or paint can be removed to give the desired colour to your flower.

Plants which were not repotted during last season can be broken up or repotted during the last week of February. Use our basic mixture as advised last issue. Sometimes a plant has not flowered for you for several seasons. Break it up now; the shock to the system sometimes forces a spike or two to appear during the coming season.

All *Cymbidiums* during the next three months should not suffer from lack of water. This is most important if manuring is carried out.

CATTLEYAS

Most *Cattleyas* bloom during the next three months. This is most unfortunate for growers who depend upon sales to florists. The social or ball season is not during our summer months. Go along to your favourite nursery during the months of the year when your *Cattleyas* are not in bloom and choose additions to your collection so that blooms can be yours all through the year. The local Orchid Societies meet each month and this also is an aid in obtaining pieces or the names of plants which flower at different periods of the year.

Irrespective of what some growers think, it is impossible, in the Sydney area, to grow *good Cattleyas* without the use of heat. Although heat is not required at this period of the year it is a must for winter flowering. Your additions or purchases should be made knowing that if you have not a heated glass house then you cannot expect to emulate the other fellow, even though you may own a piece of his plant.

It is better at this time of the year to have your ventilators open only two or three inches, both night and day, to conserve humidity. Thoroughly water your plants when they need it and then, if you have no automatic humidifiers, have a bed of ashes beneath your benches which can be drenched each day to create humidity. Seventy per cent. is not too much humidity if you can achieve this result without keeping the plants themselves in a sodden condition. Water the surroundings every day before you leave for business, and then again at evening. Very hot days will not harm the plants if humidity can be retained. Wide open doorways and vents cause too much loss of humidity and with this loss the plants quickly lose their own vitality.

Do not remove a plant from its position on the bench while the blooms are protruding from their sheath. The blooms will turn in various directions and finally flower sideways or even upside down. If the plant has to be removed then make sure it is placed facing the same way as it was before removal.

Once a week for growing *Cattleyas* is not too often to feed them with two teaspoons of Aqua-sol to one gallon of water. The plants must be watered first before the fertiliser is used.

Do not repot a *Cattleya* unless it has out-

grown its container, and then only remove the old compost just when the new roots are appearing.

CYPRIPEDIUMS

Like most orchids grown in the Sydney area, it is virtually impossible to overwater *Cypripediums* during the next three months. Damping off of buds is not considered to be caused from too much water, some of which remains in the centre of the plants, but through not enough air circulation which permits the plants to dry out quick enough after each watering.

In our conditions it is better if a tiered staging is built and then, should a plant be in flower or a bud is suspected of always damping off, these plants can be removed to the top of the staging where they can be given extra attention, such as watering into the pot instead of over it.

A small piece of a *Cypripedium* can be induced to commence root growth if it is placed in a hot box.

At the end of February top the plants off with a half inch of old cow manure spread around the top of the compost and covered with fresh compost. This practice is not for plants that are not expected to flower during the coming season. Manure only if the plant is vigorous enough to be able to assimilate the extra nourishment.

This is the time of the year when conditions which are too humid cause fungus diseases to play havoc with *Cypripediums* if they are not sprayed each fortnight with Zineb. Choose a cool day or spray at evening with our all purpose E605, Zineb and Albarol mixture.

MILTONIAS

A glass house full of flowering *Miltonias* is not so unusual in Sydney in December. More and more growers are successfully growing these Pansy Orchids. The majority of the blooms will not last if cut from the plant, though they last for four or five weeks quite fresh if they remain on the plants.

As the plants complete their flowering you will notice the new roots pushing down into the compost. Now is the time to repot. *Do not* disturb the front section of the plant, cut the old compost away, add fresh compost and usually the plant will go back into the same pot, especially if you have a new growth coming away from the back section of the plant.

Remove this section and treat as an adult plant, but in a very small pot. It is not necessary, but very harmful, to delay watering *Miltonias* after they have been repotted. The roots

are thin and need lots of water during our summer period. Water heavily twice a week and mist the plants every day in between the bi-weekly watering period.

ODONTOGLOSSUMS

With our temperatures expected to soar during the next three months, a grower who has just a plant or two of this family is usually more successful than the grower with a large collection. Success is acclaimed when these beautiful orchids are seen in bloom. Our large collections have to be kept very moist to create coolness, and as this in turn gives the plant no chance of resting during the summer, the flower spike which should appear is usually sacrificed for another new growth.

Too much shade causes the new growths to be long and spindly and the resultant bulb more like a carrot rather than a potato, though I am sure that *Odontoglossums* in Sydney will eventually prefer the company of the conditions of a shady vegetable patch in the garden rather than with the stuffy atmosphere of indoor aristocrats.

Plenty of fresh air is very necessary for the summer period, and if the plant is growing well then liquid fertiliser each week will greatly improve the new leads. Not easy to propagate, *Odontoglossums* can be induced to make a new lead on the old back bulbs if they are severed from the rest of the plant and left in the pot when the new growth is about to make up into a bulb. Use a knife for this purpose and cut the plant, leaving two bulbs and the new lead together intact on the front of the plant.

VANDAS

Watch the green tips at the end of the aerial roots. Green tips are searching for food and water. It is impossible, if open pots and an open compost is used, to over-water these plants during the summer. If a cool spell arrives the long roots in the air will remain green. When these roots turn white more water is required. Do not ever bury or try to bury the aerial roots into your compost. They will only die. Leave them be; you will notice that they travel only so far and then commence to feed from your nutrients which are supplied each week until autumn.

As you spray your other plants for fungus prevention and for insects, do not forget your *Vandas*.

PHALAENOPSES

Not much trouble to grow these orchids at this time of the year. Plenty of shade, water and fertiliser. If you want a second crop of

flowers just cut the old flowers off and cut the spike back to the next node behind the place where the first flower opened. A new branch of the spike will give extra flowers, though they are usually not as good as the previous flowers.

If there is a slug or a snail in a glass house it will always choose the new growth of a *Phalaenopsis* with which to demonstrate its sense of humour. The perforated leaf will always remain a constant reminder that some form of bait was not used before the tragedy. It is probable that more breakfasts have been ruined because of a snail than we would care to admit, even to our friends.

A piece of wire gauze cemented over the lower ventilators will prevent the entry of snails and slugs. Then a good spraying beneath the benches with double strength *Slug-it* should create future marital bliss.

Slug-it or metaldehyde is better prepared and left for twenty-four hours before use, and then leave the watering of plants as long as possible to give the preparation a chance to eradicate all the unwanted guests.

—535 Willarong Rd., Caringbah, N.S.W.

• **BOOK REVIEW:**—"Orchids in Australia" by Fred Moulen, Austral-Edita Pty. Ltd., Sydney, £6/6/-.

In the extract of Sir John Hall Best's introduction, "This is the province if not the prerogative of Pictorial Art, where the painter, the photographer and the specialist printer reign. As a Chinese proverb says: One picture is worth a thousand words," this collector's edition is truthfully presented.

The magnificent photography of *Cymbidiums*, *Cattleyas*, *Vandas*, *Cypripediums*, *Dendrobiums*, *Miltonias*, *Odontoglossums*, *Phalaenopses* and various other orchids will appeal to all lovers of beautiful flowers whether orchid enthusiasts or not.

A preface on the history of Orchid Culture in Australia by Dr. J. A. Vote is a splendid addition to this de-luxe issue containing a selection of eighty-four full colour reproductions from Kodachrome slides.

The text and commentary by Fred Moulen is written in a modern picture book style and will be thoroughly digested by all amateur and professional orchid lovers.

Truly a unique volume to become a collector's item.—H.J.L.

• A membership with the Orchid Society of N.S.W. Ltd.—Secretary, Mr. K. Lamont, 42 Lawley Crescent, Pymble—will ensure your copy of the A.O.R. in the mail.

Victorian Orchid Club Spring Show

J. N. RENTOUL

• Held again at Preston Motors Show-room, the Spring Show was the most successful for many years. There is little doubt that this display area offers the best facilities for showing orchids in Melbourne . . . or perhaps we should say the best available. One thing that needs rectifying, however, is the mortality rate of the flowers. It would be no exaggeration to say that several thousand pounds worth of flowers were ruined this year in an atmosphere that suited neither plants nor humans. It cannot be repeated without several members flatly refusing to sacrifice their flowers.

Just as in Sydney, Dorchester 'Jeanette' proved a winner and a minor placegetter in the champion *Cymbidium* class. Girrahween 'Enid' filled second place, but it was not the 'Enid' of championship class. In Melbourne we have yet to see it at its ultimate best. *Cymbidiums* have never been better than they were this year at the Victorian Show, the quality being there on every exhibit. New ones? Yes, in two or three places, and the best of them Robin Redbreast. Others attracting attention were Garda x Ramboda, apricot coloured; Sussex Moor, beautifully shaped green, from a country member who had a very fine pink in last year, Mr. Frazer. And the controversial *Cymbidium* we have seen before, Mr. Leverett's Charmant 'Kernbrook Glory', presented better than we have seen, is something that needs taking apart in another issue, perhaps in the March number of A.O.R.

Cymbidium Promona 'Tanandra' in almost specimen class was shown in two or three plants, and others that we have missed in latter years that were represented this year were *Clianthus* 'Girrahween' and at least one very finely flowered plant of Sussex 'Laelia Sasso'. Girrahween 'Gloria' was represented on nearly every exhibit, and varied from very good to good.

Cypripediums never seem to change much in numbers at our shows, but we seldom see the attractive larger exhibits we once had. This year there was only one mass exhibit, and that was not up to past years' standards. The winners have won before, and the one to beat them has not yet shown up. Perhaps some development of later varieties will bring new ones, but

the *Menthules* 'Marjorie' and 'Cordelia' will take some shifting into the rear ranks because they are consistently shapely.

Lycastes were not so numerous this year—perhaps there was too much cutting up last year. But Mrs. Cole again equalled her sixteen flowers of 1957 on a very nice plant.

Another miscellaneous orchid that does not appear very often was *Epidendrum* O'Brienianum with sixteen nice full heads of flower. An Australian native that has become a regular entry at our shows seems to flower all the year—*Cymbidium* Canaliculatum 'Sparkesii' of the rich purple-red flowers, making up in numbers what they lack in size.

The *Cattleyas* lasted about half a day after they were judged, and the best of them not as good as last year. The colour of several in the yellow-green-orange shades showed up well while they lasted, particularly one or two exhibited by Mr. Leverett.

The results of the Spring Show were as follows:

Champion Cymbidium — Dorchester 'Jeanette', C. Davis, 1st; Girrahween 'Enid', R. Martin, 2nd; Dorchester 'Jeanette', J. Rentoul, 3rd.

Best Decorative Cymbidium — Girrahween 'Gloria', G. Leverett, 1st; Girrahween 'Zenzi', F. Rooney, 2nd; Regina, T. Imrie, 3rd.

Best Green Shade Cymbidium — Sussex Moor, A. G. Fraser, 1st; Midlothian 'Greensleeves', J. Allan, 2nd; Glenbrook 'Greenacres', W. Wright, 3rd.

Best Yellow Shade Cymbidium — Swallow 'Daffodil', W. Wright, 1st; Swallow 'Daffodil', T. Imrie, 2nd; Swallow 'Daffodil', W. Wright, 3rd.

Best Red Shade Cymbidium — Robin Redbreast 'Lynbrae', J. Allan, 1st; Priam 'Ada Meech', Capt. & Mrs. C. Cole, 2nd; Carisbrook 'Brick', J. Mason, 3rd.

Best Pink Shade Cymbidium — Rang, R. Martin, 1st; Aldis Lamp, J. Rentoul, 2nd; Louis Sander, F. Aldous, 3rd.

Best White Shade Cymbidium — Dorchester 'Jeanette', C. Davis, 1st; Alex Album x Alex Perf., H. Nelson, 2nd; Cassandra 'Jennifer', M. Greenwood, 3rd.

Best Specimen Cymbidium — Sussex Dawn, R. Martin, 1st; Delrosh, Kirksley Orchids,

2nd; Cooksbridge 'Kirksley', Kirksley Orchids, 3rd.

Best Cattleya — Bob Betts, J. Allan, 1st; B.L.C. Springtide, V. Smith, 2nd; *Laelia* Ancepts, J. Allan, 3rd.

Dendrobium Hybrid — Model, H. Schultze, 1st; Gatton Monarch, F. W. Paddock, 2nd; Montrose, L. Gardiner, 3rd.

Best Dendrobium in Exhibition — nobile, N. O'Sullivan, 1st; nobile, J. Garton, 2nd; Jamesianum, W. Wright, 3rd.

Odontoglossum — Crispum, Kirksley Orchids, 1st; Nirvana, J. Garton, 2nd; Fraser, J. Rentoul, 3rd.

Miscellaneous Orchid — *Lycaste Skinnerii*, Capt. & Mrs. Cole, 1st; *Epiden. O'Brienianum*, W. H. Schultze, 2nd; *Vanda Honolulu*, W. H. Schultze, 3rd.

Specimen, Coelogyne and Cymbidium excluded — *Lycaste Skinnerii*, Capt. & Mrs. Cole, 1st; *Epiden. O'Brienianum*, H. Schultze, 2nd; *Dend. nobile*, G. Knight, 3rd.

Cypripedium — *Menthule 'Marjorie'*, C. Davis, 1st; *Euryostum 'Rex'*, C. Davis, 2nd; *Menthule 'Cordelia'*, Kirksley Orchids, 3rd.

Cypripedium, Red — *Nesta x Etta*, H. Nelson, 1st; *Greyhound*, Jones Bros., 2nd; *Robur*, C. Davis, 3rd.

Cypripedium, Yellow — *Sunbeam*, D. McNamara, 1st; *Golden Moon*, C. Davis, 2nd; *Major Hanbury Carlisle*, C. Davis, 3rd.

Australian Native — *Cym. Canaliculatum* var. *Sparkes*, W. H. Schultze, 1st; *Den. Superbiens*, W. H. Schultze, 2nd; *Sarcochilus Hartmannii*, Kirksley Orchids, 3rd.

Novice — *Cym. Girrahween 'Gloria'*, J. Mason.

Hodgins Award — W. Wright.

R. Vick Award — G. McCraith.

Cameron Award — J. Allan.

Wondabah Trophy — J. Allan.

Cymbidium Seedling — York, Hodgins Orchids.

Cymbidium, at least Twelve Flowers — Girrahween 'Zenzi', F. Rooney.

Cymbidium with most Flowers — Delrosa, Kirksley Orchids.

Dendrobium Specimen — Nobile, N. O'Sullivan.

Display of Cypripediums — Jones Bros.

—J. N. Rentoul.

• Owners of the A.O.R., Shepherd & Newman Pty. Ltd., say that increasing costs have caused the deletion of the colour photo in this issue. —H.J.L.

• Mr. Alan Begg, who has been a committee member of the Orchid Society of N.S.W. for the past fifteen years, has resigned this season. All the members and friends of the N.S.W. Orchid Society are indebted to Alan for a job well done. As well as President of the Society, this unselfish stalwart has been a judge who has been much in demand for many years.

It is to be hoped that the leisure time now gained will once again bring the Begg orchid collection to the show bench; as it is still remembered that the best six cymbidiums ever seen in the Sydney Town Hall were entered by Alan Begg.—H.J.L.

• *THE ORCHID SOCIETY OF N.S.W. LTD.*—The election of Officers for 1958-59 resulted as follows:—

President: Sir John Hall Best.

Vice-Presidents: Messrs. H. R. Crutch, A. B. Porter.

Secretary: Mr. K. D. Lamont, 42 Lawley Crescent, Pymble.

Hon. Treasurer: Mr. J. K. Nicoll, A.A.S.A., 2 Gibson Road, Mosman.

Hon Editor: Mr. H. J. Lawler, 535 Willarong Road, Caringbah.

Hon. Librarian: Mr. R. Trenerry.

Hon. Registrar: Mr. W. R. Smoothey.

Committee: Dr. C. D. Badham, Messrs. J. W. Bisset, J. C. Davis, H. H. French, R. L. Gerathy, F. W. Jones, J. E. Mackinney, L. Sasso.

• *FRONT COVER.* This outstanding creation of an idea, although it only gained fourth position at the N.S.W. Festival in the Sydney Town Hall, was undoubtedly one of the features of the Show.

Although many points were lost due to the lack of orchids, the unique presentation was one which was much appreciated by orchid enthusiasts and other "gardeners" as well.

The Mosman Society should have been very proud of their interpretation of the Horn of Plenty, Cornucopia.

Melanism in Our Orchids

J. N. RENTOUL

• The meaning of the word melanism is clear. It derives from the Greek word indicating intensifying colour toward black, and should not rightly be used in regard to orchids. But it is the only word which conveys the true sense of deepening colours to the ultimate depth in our flowers. Therefore, Melanism it is . . . the peculiar dominance of pigment of any colour darker than a standard common in the flowers.

All colour is said to be the reflection of light from the surface of flowers, the other colours of the spectrum being absorbed in some way in the crystalline surface. Certainly when we try to find that pigment the flowers seem to be ninety-nine per cent. moisture, one per cent. solid and nowhere in that solid enough pigment to paint the surface of the petals and sepals with the colour they possess. So perhaps the theorists are right, and we truly see the reflection and not the colour. But before going in too deeply we will push the theorists aside and get on with it.

Having prattled idly of albinism in our orchids it is fair that the other side—the darker side—should be dealt with. And blackmarkets and shady characters will not enter our story. Nor has melanism anything to do with the things we put ice-cream in or spit the pips out of. Melanism is the opposite, and yet not the opposite, of albinism. It is the darkening of pigmentation of flowers for no good reason other than a change of locality. It is sometimes accompanied by modifications of form, so that a species in our orchid families is sometimes mistaken for a new one while it is only a modification of one already commonly known and localised. Latitude plays strange tricks.

Most orchid growers will be familiar with *Lycaste Skinneri* in one form or another, and there are upward of a dozen different varieties in our Australian glasshouses alone. Variations in shape may be expected, as they occur in very stable hybrids from person to person in all genera of orchids. But these various *Skinneris* may be flowered in different tones of colour from one State to another, and where in Victoria we may get a deep rose colour in a flower, a propagation sent to New South Wales may be several shades lighter or darker. That is not melanism; it is an easy way of indicating how melanism occurs.

Melanism in naturally occurring species—

that is, growing in their own native part of the world—is not rare; it is common, and though a species may shade all the way through from pale pink to deep rose it is all the one family rendered stable through cross-pollinisation in its own area, the colours balancing out all the time. But occasionally one particular plant will occur with pigmentation very much more intense than any of its fellows. Not confined to one flower, but to a whole series of flowers on the one plant, it is a constant characteristic that can be used as a breeding basis, *but is not necessarily true in its progeny*. A very good example of melanism in one of its many phases can be had from a batch of *Dendrobium Bigibbum* variety *phalaenopsis* from Northern Queensland. In a dozen plants there will be no two alike in shape of flower or colour. The lightest of them will be one extreme, the other the darkest, and in between the two the balance, the stabilising factor in all nature—the ordinary everyday type which is a combination of all the good and all the bad which it can transmit to its seedlings in varying degrees or stable combination. The darkest is an example of melanism.

Melanism is the opposite, yet not the opposite, of albinism for two reasons. It is not the opposite because in an albino mischance has robbed it of colour yet enhanced it; melanism does not always enhance, in whatever flower it appears. There is offset against that, too, its very uncertain colour breeding characteristics, which may be recessive in one generation yet could be intensified beyond imagination in its second generation. An albino correctly used has an extremely prepotent tendency to breed whites.

It is only in recent years that orchid breeders have paid marked attention to breeding whites in their flowers. There were always sufficient white species orchids or near whites to satisfy all tastes. The future of the whites is with us now, but the future of the colours available in examples of melanism is still in the future, but not too far away now so far as *Cymbidiums* are concerned. Colour breeding, particularly toward reds, has been a constant aim in breeding for many years, and though the process was temporarily sidetracked first by using polyploid parents and again by the Second World War, they were both invaluable lessons to man in so many ways.

Melanism, or simply over-pigmentation, induced breeders to intensify the pink to red colour apparent in selected species plants that perhaps emanated from another than its usual locality of origin. *Insigne*, in Cymbidiums, appeared in the manner described previously, from palest pastel pink to almost deep rose colour in a very minor number of plants. The origins of most of the good species are perhaps lost now, but it could have been interesting to know if they were isolated or common in any particular area. The reddest of the species, *giganteum*, must be the cornerstone of many of our present-day reds, but the catalyst that fixed the colour remains, in my opinion, *Lowianum*. This species usually is bronze coloured, but a thorough examination of the darkest flowers yields up an impression of pure red veining and suffusion at the base of the petals and sepals. These darker flowers are good examples of melanism and would occur in particular localities apart from the general run of the species.

Beginning possibly with self-crosses, *Lowianum* was put to work, and over the years has left an impression as indelible as *insigne*, and in some respects outweighs the influence of *insigne*. Several problems arose with the use of both *Lowianum* and *giganteum*, but the most formidable was that of colour-size linkage. It held up the production of larger flowers for a considerable time and still exercises great influence. With the advent of Alexanderi 'Westonbirt' all the problems seemed solved, as there was a spare set of chromosomes floating about that seemed certainly devoted to the vigour of the plant and therefore the flower. However, we all know the answer to that one, and though the belief was sustained, in regard to colour it was quite invalid. Whatever brilliance was used in combination with Alexanderi 'Westonbirt' was washed away in the dominance of the white tetraploid. Some work is waiting to prove the dominance of all whites over melanism, but it can be thankless work in Cymbidiums, as the day of the polyploid is definitely here to stay.

There are now many tetraploid cymbidiums and polyploids which will breed readily, and it is with these in combination with our darker and rare reds that we can expect to see some changes in a few years. Already several deep purple-red Cymbidiums have appeared, perhaps the best of which was flowered in 1958 by Mr. J. Allan, of Melbourne, in this case Robin Redbreast (Constance Flory x Remus).

It is in these newer flowers that two problems have been overcome. The first of these

was to obtain an even distribution of colour in all the flower segments, instead of intensity in the sepals with an unfortunate transparency in the petals. This transparency could well be attributed to *insigne* rather than to any other species, as both *Lowianum* and *giganteum* are consistently textured in their flower parts where *insigne* has crisper sepals than petals. (The sepals are the outer parts of the bud which protect the two petals and the labellum in the bud stage. In the past I have had some criticism for not being clear to beginners as well as older growers, who can bypass the parenthesis.)

Colour inheritance is not necessarily a matter of breeding from a flower which could be suspected of melanism or which is obviously a flower in that category; neither can it be a certainty in crossing two reds that reds will emerge. Rather is it a process where the inheritance can be seen clearly unless we take the pedigrees of plants apart and see what they have more than anything else. Surprise follows surprise here, and we find the *Lowianum* theory if not vindicated, then at least strengthened.

Originally breeding not for greens, let us suppose that early hybridists looked beyond the green of *Lowianum* and saw the intensified red in some of their flower spikes. When we look at Robin Redbreast we see *Lowianum*, perhaps through melanism, but most certainly *Lowianum* in abundance.

When we look at Doris 'Aurea', probably the best red we had seen until a year or so ago, we see *Lowianum* in abundance, and when we look at some of the very bright Constance Florys we see *Lowianum* predominant. The pedigree of Doris 'Aurea' is given because one side of it enters into the parentage of Robin Redbreast. The other side goes back through Ceres, the same line that tends to substantiate a theory that we go back to a red-dominant *Lowianum* to which we owe all our reds.

Doris 'Aurea' has seven infusions of *Lowianum* in its parentage in nine generations, so that even if it does not carry colour at least it tends to assist colour to dominate. By colour, of course, we mean the apparent colour of Doris 'Aurea'.

In every species and genus there must be one in many thousands of plants that has the right make-up to reproduce deeper colour than it has itself. Sometimes by chance a breeder has fluked the right plant to combine with his own selected parent and has produced a winner. For ever afterwards that breeding plant should be known, just as *Lowianum* 'Compte de Hemp-

Doris 'Aurea'	Lysander	{	Lady Colman	{	Traceyanum	
					eburneo-Lowianum	
		{	Pres. Wilson	{	Alexanderi	{ insigne
					Lowianum	{ eburneo-Lowianum
	Chiron	{	Bustard	{	Garnet	{ Parishii
					Lowio-grandiflorum	{ Lowianum
		{	Pres. Wilson	{	Alexanderi	{ eburneo-Lowianum
					Lowianum	{ insigne

tinne' is known. Too frequently there are three or four masqueraders that have attached to them these varietal names, laying the foundation for disbelief and dishonesty.

However, all theories are propounded more as a challenge to someone to disprove them as valid and authoritative statements. Perhaps there is no one alive today who can add anything factual to that theory, but when a look is taken at the appallingly long list of Cymbidium hybrids, let alone the list for other genera, it is quite evident that one day it will have to be rationalised and revised. We cannot keep going on and on. There is room in other genera, and Vandas are being used in their melanitic

forms to produce intense blues and pinker pinks and redder reds. But one day their numbers must present the same problem. Combined and recombined, they will be named but never renamed.

And so we finish with unsolved questions: Do greens breed reds? Do colour-intensified species from certain districts infuse their colour as whites steal the colour away from coloured flowers? Is there a blue Cymbidium round the corner? And who is going to look after my plants while I am on holidays? (Are they worth looking after?—Ed.)

—43 Denman Ave., Glen Iris, S.E.6, Vic.

Summer Culture in Victoria

J. N. RENTOUL

• Apart from a few Australian native orchids and a few very hardy Cymbidiums, most Victorian growers have their orchids under glass, and the latitude of Victoria, and Melbourne in particular, is almost the extreme south of the continent, subject to fluctuating temperatures over a range of up to thirty degrees in a day. Growers who try to match up this state of affairs with culture designed for New South Wales and even north of that State can have nothing but disillusionment in store. In orchids liking extreme temperatures and humidity we have an exception, but these also have to be treated differently when grown in a cold State.

Most orchid growers take to Cymbidiums as their main genus, but unfortunately few growers have a glass house ideally suited to them. These orchids prefer spacious enclosures, plenty of fresh air and plenty of room to ex-

pand. Although suburban backyards are ill-suited to build large glass houses, these structures should be made as large as possible. Fresh air and sunlight from earliest morning until late afternoon is one of the secrets that must be mastered and appreciated. Not only is it necessary to have openings low on the walls, the roof also should be capable of allowing an air flow. It is very easy to take out four of the uppermost sheets of glass in the glass house roof at various places and replace them with a similar sized sheet of galvanised iron that is hinged to the ridge on the outside and can be raised and lowered from inside the glass house.

Though many of us have been sceptical about planting Cymbidiums in built-up beds in our glass houses, it is quite obvious that if flower production is the aim there is no quicker way to build up a plant. The defects appear later

when the plant must be taken out for replacement of compost or to divide the plant. If there is room it is worth trying, primarily for flower-producing plants that are not required for the shows or interior decoration. If the bed system is given a trial, do not make the mistake of putting all large plants or all small plants in together. Mix them, so that it is not necessary to dig them all out at once. Individual plants can be dug out and material replaced as they become too large or encroach on their neighbours. Pots are so expensive these days that any way of dodging buying new ones is worth trying and summer the season to introduce the system.

Where a few years ago *Cypripediums* seemed to give little trouble in the summer, many growers are finding that their plants are losing growths as fast as they are replacing them. Generally this can be ascribed to carelessness in potting and not potting when the plant needs it. In a glass house where heat is maintained until there is a steadier thermometer in the sixty-upward range, there should be no trouble if plants are repotted in August, and later, as soon as the flowers are cut. It is not good enough to replant them into whatever compost happens to be on the bench. Their material needs are coarser than for *Cymbidiums*, particularly in the upper layer of the compost where the base of the rhizome or growth meets the compost. Rotting at this point is surely an indication that the plant has been carelessly potted and is in need of handling. Paint the infected points with collodial sulphur or some other agent that reacts against fungus and rotten conditions and repot into a coarser compost that is topped with a layer of fibre and moss and keep the base of the plant clear of the surface even if the plant must be staked upright. Three weeks is normal time for a new root appearance, and from then on the plant should progress. Too cold conditions for a large part of the year are quite unsuitable for all *Cypripedium* hybrids, so that any improvement in the plant in the summer must be maintained through the autumn and winter.

Cattleyas are perhaps the easiest of orchids in Victoria in summer. They do make progress quite equal with that in northern States if the glass house is governed by two rules—high temperature allied with high humidity—but neither of these two conditions on its own. On the hottest days there should be liberal application of water with a small air flow in the glass house, preferably high up on the walls for an inlet,

so that the moisture in the lower part of the glass house is not driven out by a draught. Air circulation should be by a flow down the inside of the walls or one wall, across the floor and then upward through the house, so that the moisture is picked up and distributed. Upper openings should be restricted to prevent a large air flow. In this way both heat and humidity are retained in the house, an ideal double for the best *Cattleya* plant production, the prerequisite for better flowers.

In Melbourne most growers still have difficulty with *Odontoglossums* . . . not that Melbourne growers are different in this regard from growers in many parts of the world. There is not so much trouble in growing them as in flowering them. Situation in the glass house is important and *Odontoglossums* will tolerate far darker conditions than many growers realise. Dense shade must be balanced out with a lessening of water applied in the pot, and it is in watering that most cultural mistakes are made. If the glass house is suited to these plants, in September they will have actively produced new roots on the immature growths. These growths should mature in the early summer and flower in early autumn. It is in flowering that most trouble is experienced. The plants tend to commence another growth instead of flowering, and the only valid explanation seems to lie in the temperature at which the plants are matured.

It has been claimed that light plays a greater part than any other condition to which the plants are exposed at this stage of growth. That may apply in one glass house where it would not in another, so that it would be more fitting to try the effect of temperature rather than a lessening or intensification of light. Naturally, how to keep them cool or to cool them off still further poses a problem. It can be solved in this way alone where one glass house only is available in which to grow them: there is a difference of up to twenty degrees in the temperature reading of a glass house from the roof to the floor on a summer day, and it is in the positioning of the plants in the most suitable temperature for maturing and flowering that an answer will be found. Just what is their most suitable temperature, of course, must be found out by experiment. Do not hang them in a draught where they will dry out too rapidly. Don't concentrate too heavily on them or the balance of other orchids will suffer. But remember they like fresh air and they like moisture. Somewhere nearer the floor than their



THE ST. GEORGE ORCHID SOCIETY

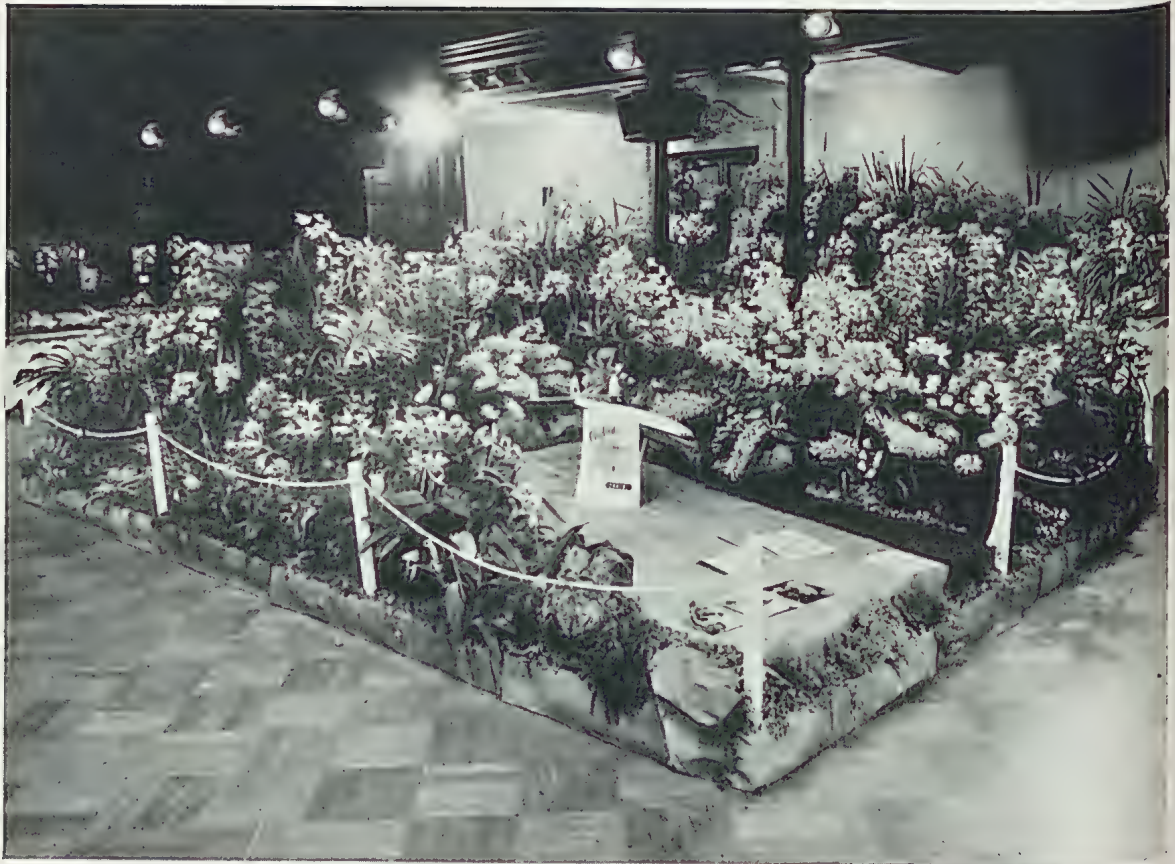
Third Prize in Best District Exhibit, Orchid Society of N.S.W. Festival 1958. 117.73 points.



CYMBIDIUM YORK 'MARGARET OLIVE'
H.C.C. O.S. of N.S.W. Ltd. 1958. Owner R. Sands. The raceme carried fifteen chrome yellow flowers in an upright manner. Individual flowers were $3\frac{1}{4}$ inches across, of good substance and shape but rather cupped. This was a concolor with little variation in petals, sepals and labellum. Reg. No. 392.



CYMBIDIUM STARLIGHT 'CROWN'
A.M. O.S. of N.S.W. Ltd. 1958. Owner R. Gerathy. The raceme carried ten flowers each 4 inches across, of a white waxy texture flushed with green. The labellum had a dusting or marking of yellow. Reg. No. 378.



THE WESTERN SUBURBS ORCHID SOCIETY.
Fifth Prize in Best District Exhibit, Orchid Society of N.S.W. Festival 1958. 102.27 points.



CYPRIPEDIUM MADGE-LE-GROS
'WINDSOR'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner Mrs. S. Hayter. The flower was 4 inches across. The dorsal white in colour with green and red markings, was frilled. The petals were reddish in colour. The pouch was of a red brown colour. Reg. No. 382.



CATTLEYA GENERAL PATTON 'BALMORAL'
The
H.C.C. O.S. of N.S.W. Ltd. 1958. Owner A. Persson. The plant carried two flowers, that selected for award being 6 1/2 inches across, white in colour with a dusting of yellow in the throat. Reg. No. 373.

unsuccessful position would be a good starting point.

In one very important cultural phase most growers fail. Where fertilisers are used it is vital that the plants must not dry out. This becomes more important as the amount of fertiliser increases. Soluble nutrients tend to become fixed in various components of the material used and in the pots themselves. Where dryness occurs, the pots and the compost will take the water from the plant, and it is this which causes shrivelling as much as glass house heat.

The rapid acceptance of concentrated and vigorous fertilisers by all growers is perhaps the most progressive feature in orchid culture today, and the added bulk fertiliser varies according to individual fancy from poultry manure to commercial chemical combinations. Whatever is used is best applied now, while the plants are vigorously sending roots through the compost. There is a borderline between sufficient and too much, and it is better to err toward insufficiency unless some experience can pick the borderline. Whatever is used, do not use it as a surface dressing. Remove the top inch of compost and distribute the fertiliser evenly over the surface then cover it again with plain tan-bark that will act as a moisture barrier. While the fertiliser is active there should be steady leaching of the nutrients toward the bottom of the pot, with *no drying out* until late autumn brings cooler weather and less evaporation.

Epiphytes generally prefer small quantities of fertiliser and a very suitable material is blood and bone applied a pinch at a time at three-weekly intervals.

Summer is the period when the flowers are built into orchids, and the shade should be sufficient to prevent burning without being dense enough to encourage soft growth. Plant food in soluble form should be used against strong light, as in this way hard vigorous growth is encouraged.

—43 Denman Ave., Glen Iris, S.E.6, Vic.

• **SHOALHAVEN ORCHID SOCIETY:**
—The Third Annual Orchid Exhibition, which was held at the R.S.L. Hall, Junction Street, Nowra, on Sunday, 21st and Monday, 22nd September, 1958, was the most outstanding exhibition ever seen in Nowra. Despite heavy rain and gusty southerly winds the attendance was well above previous years. Competition was very keen. All prizes were

awarded to any plant in the presentation which was tastefully arranged without distinctive classes. The Judges praised the members who staged the exhibition for their efforts. The quality of blooms was equal to suburban shows.

Results:

Grand Champion Cym.—Dorchester 'Jeanette'—D. O'Brien.

Reserve Champion Cym.—Balkis 'Patricia'—A. Prior.

Champion Coloured Cym.—Angelia x Esmerelda—D. O'Brien.

Best Cym.—Dorchester 'Jeanette'—D. O'Brien, 1st; Balkis 'Patricia'—A. Prior, 2nd.

Best Yellow Cym.—Swallow 'Daffodil'—A. Morison, 1st; Memoria Albertii 'Albert'—D. O'Brien, 2nd.

Best Red Cym.—Profusion 'Violacia'—D. O'Brien, 1st; Priam 'Ada Meech'—A. Morison, 2nd.

Best Pink or White Cym.—Balkis 'Margot'—D. O'Brien, 1st; Dorchester 'Jeanette'—D. O'Brien, 2nd.

Best Cym. for Export—Gossoon 'Pastel Queen'—A. Morison, 1st; Linnet—A. Brown, 2nd.

Best Decorative Cym.—Louis Sander—A. Morison.

Best Cym. for habit of growth, culture and quality of flowers—Princess Elizabeth 'Berry'—A. Morison.

Best Specimen Cym.—Louis Sander—A. Morison, 1st; Gossoon—A. Morison, 2nd.

Best Cyp.—Lavina—A. Prior, 1st; Edenbridge—A. Prior, 2nd.

Best Dend.—*Jamesianum*—A. Prior, 1st; *Falcorostrum*—D. O'Brien, 2nd.

Any Other Orchid—Coelogyne—A. Brown.

Best Orchid grown and owned by a Lady—Cym. Cassandra 'Evadne'—Mrs. A. Brown.

Best Orchid by a Junior Member—Ralph Sander—Sidney Ford, 1st; Hawk 'Moth'—Robert Kells, 2nd.

Best Cymbidium grown by a Novice—Linnet—A. Brown.

Best Cym. for Colour grown by a Novice—Esmerelda—J. Apperley.

Members Display of area 6ft. x 6ft.—A. Brown, 1st; J. Apperley, 2nd.

Shoulder Spray of Orchids—Mrs. A. Brown.

Arrangement of Orchids and Driftwood—Mrs. A. Brown.

Container of Orchids—J. Apperley.

Most Successful Exhibitor—D. O'Brien.

—J. Morison.

Judges and Judging

W. SMOOTHEY

• Each one of us naturally thinks that he is capable of selecting the better of any two objects with which he has a working knowledge, and that it is only a simple further step to "judge" exhibits, whether they be babies, dogs or flowers, and whether it be for a "prize" or an "award". The danger of judging babies is generally recognised, but we seem to overlook the fact that flowers, especially if they be orchids, are closely akin to babies so far as their owners are concerned, and while we have no record of any of our Judges being harshly treated that only proves how tranquillising orchids can be.

At most Shows the outstanding exhibits generally select themselves, except perhaps in the eyes of other exhibitors, but this self-selection is not always certain and so we have independent Judges who make the decision as to the plant entitled to the prize in the particular class or, in the case where a plant is submitted for an award, a panel of not less than seven judges considers it and decides whether the plant is worthy to be recommended for an award. And if so what award. It is important, therefore, that you, the orchid grower, should know who these Judges are in the orchid world, who appoints them, their powers, duties and responsibilities, and the standards (if any) by which they work. The purpose of this article is to tell you these things so that you can with greater confidence exercise your own powers of selection and compare your own views with the views of the constituted authority.

The British concept of government envisages a balance of powers between the Legislature, the Executive and the Judiciary. Thus, the sovereign power or government of the country comprises the Legislature of body which makes the laws, the Executive or authority which carries the laws into effect so far as they relate to the public services and the Judiciary which enforces the due observance of the law. So far as the orchid world in New South Wales is concerned we find a somewhat similar concept with the translations, as follows:

For the Legislature we have the Orchid Society of New South Wales Limited.

For the Executive we have the Committee (of Management) of that Society which consists of the President, two Vice-Presidents, a

Treasurer, Editor, Librarian, Registrar of Awards and eight Committeemen.

For the Judiciary we have the Judges comprising eighteen Judges, five Associate Judges and certain Reserve Judges.

At the present time the Judges (with the suburb in which they live in brackets after each name) are as follows:

Messrs. A. R. Begg (Bellevue Hill); A. Birdsall (Blakehurst); J. W. Bisset (East Lindfield); C. Cambourn (Northbridge); H. R. Crutch (Hurstville); R. S. Dickson (Denistone); L. Giles (Carlingford); G. E. Glissan (Balgowlah); E. L. Hayes (Campsie); J. A. Janesse (Lakemba); F. Jones (Abbotsford); W. W. Kavanagh (Dee Why); B. C. Oxley (Abbotsford); L. A. Peaty (Caringbah); A. B. Porter (Eastwood); F. M. Slatery (Bexley); J. C. Thompson (Hurstville); R. E. Trenerry (Lane Cove).

The Associate Judges are:

Messrs. A. Luth (Waverley); L. A. Broadbent (Penshurst); L. Sasso (Henley); B. C. Schwartz (Lugarno); B. A. Deane (Cheltenham).

The reserve Judges are:

Messrs. C. A. Deane, S. James, W. Brinsley and Dr. J. Vote.

These reserve Judges are men who have rendered worthwhile service to the Society as Judges but are unable to carry out the active duties of judging at the present time; the benefit of the wealth of their knowledge and experience should not be lost to the Society.

In dealing with the Judges as such, perhaps the first thing to realise is that they resemble their opposite numbers of civil life in the world at large in many ways, such as the primary need to qualify by experience and training to hold what is a privileged and highly regarded position. Again they must be men of good standing, of irreproachable integrity and conscious of the fact that their actions are always subject to particular and critical scrutiny so that they must see that not only is "justice done", but it must also appear to be done. However, the Judges of the Society may be removed or suspended by the Committee.

You should, therefore, know that they are all appointed by the Committee. Each year six of the Judges retire in rotation and are eligible for re-election. The Committee elects

(each year) six Judges from the retiring Judges and any eligible Associate Judges. Associate Judges are required to serve at least one year as such after which they are eligible for appointment as Judges provided they have attended judgments of at least seventy-five per cent. of the submissions for Awards and are reported on by the Judging Committee as being competent. If any Judge or Associate Judge absents himself from five consecutive Judging Panels without reasonable explanation his appointment may be cancelled by the Committee which, in such event, appoints Associate Judges or other qualified persons to fill any vacancies in the Judging Committee. The Reserve Judges are also appointed as such by the Committee when it considers the circumstances warrant that course.

In actual practice, of course, recruitment of Judges is generally from the ranks of Associate Judges. These Associate Judges are recruited when the need arises in this manner: All members are notified by means of the monthly circular and announcements at the meetings that applications are called for the position of Associate Judge and applications are to be forwarded to the Secretary by a certain named date. The applicants are then invited to attend a meeting of the Judges convened for the purpose and the applicants are individually interviewed and asked questions designed to establish the extent of the knowledge of the applicant so far as it concerns (a) judging in general, (b) judging and growing orchids and (c) judging and growing miscellaneous genera of orchids. The applicant is also asked to judge "aloud" a plant tabled for the purpose. When all applicants have been similarly interviewed the judges decide whether or not any of the applicants will be recommended for appointment and if more than one is recommended they suggest the order of preference. The Registrar of Awards as Chairman of the Committee of Judges then makes a suitable recommendation to the Committee of the Society.

You will see that the potential Judge is required, if possible, to have a practical as well as theoretical knowledge of judging and of orchids, and a lot of value is placed on a knowledge of "miscellaneous" genera. This is because in the Sydney area most growers have a pretty fair knowledge of *Cymbidiums*, some knowledge of *Cattleyas*, *Cypripediums* and *Dendrobiums*, but the growing interest in *Vandas*, *Miltonias*, *Phalaenopses* and other genera makes it necessary to get the services of the best

available knowledge here of these genera. There are naturally very good arguments to support the proposition that Specialist Judges in each genus are desirable, but we are conscious of the fact that such men are not available to us and we of necessity appreciate our limitations, carefully determine our standards and try and educate our Judges having regard to world standards and having the benefit of colour slides, illustrated material and award plants from overseas.

The powers, duties and responsibilities of these Judges are found in the Articles of Association and By-laws of the Society coupled with the standards that have been approved from time to time, but for your information these will be set out in the next issue of the Review with explanatory comments intended to be of a helpful nature. The opportunity will also be taken then to deal briefly with the matter of judging to a "points" standard or judging by "appreciation". The latter is in force for a trial period in New South Wales.

As a number of questions were raised concerning judging at some Shows and you may have wondered why some plants, obviously outstanding, were passed over, I'll just anticipate one item from the By-laws, namely, By-Law III(e) 3 dealing with "Eligibility for Awards and Prizes", which is as follows: "Any plant from which buds or flowers have been removed or are missing will be disqualified for judging unless it happened by accident during transport and the detached bud or flower is presented with the plant."

So next time you see the obviously outstanding plant overlooked see if buds or flowers have been removed. Know the rule which in some circumstances is hard, but also remember that the Judges do not make the By-laws. They interpret them fairly, sometimes with embarrassment, but they know the purpose of the By-law is to prevent "bud pruning" or the removal of badly placed or deformed flowers. All growers know the By-laws and exhibit subject to them and it is obviously unwise to allow discretion in the matter.

—15 Merlin St., Roseville, N.S.W.

• *THE MELBOURNE EASTERN ORCHID SOCIETY*:—The Annual Spring Show was held at the Camberwell Town Hall on Saturday, 27th September. The most important feature of the Show was the increased number of exhibitors. Keen judges were unanimous in the opinion that exhibits were by far

the best display of quality plants yet staged by the Society.

The Society's silver trophy awarded for the best display of orchids of more than one genus was won by Mr. V. Smith, whose display featured a nicely flowered *Cattleya Cliftonii*, magnificent as a centre piece. Other plants included *Cymbidiums* *Balkis* 'Patricia', Swallow 'Bellevue', Swallow 'Daffodil', Joyance 'Cinnamon' and *Arabella* 'Magnificent'.

The best group 6ft. by 3ft. 6ins. was won by Mr. R. Martin with an attractively staged display of *Cymbidiums* which included *Cyms.* *Girrahween* 'Enid', *Gloriana* 'Tudor Rose', Swallow 'Magnolia', *Arabella* 'Magnificent', *Sussex Moor* 'Judy', *Judge Markell* 'Jean' and *Druscilla* 'Golden Emperor'.

A non-competitive stand was staged by Mr. J. J. Allan. Mr. Allan's display consisted of excellent quality plants; numerous decorative and various foliage plants were used to embellish the group, which included such favourites as *Cyms.* *Dorchester* 'Jeanette', *Cygnus* 'Opalescent', *Sussex* 'Laelia Sasso', *Marmie Kingsford* 'Arncliffe', *Cyzara* 'Merrilong', *Doris Aurea* 'Alana', *Dendrobium Montrose* and a brilliant red seedling, Robin Redbreast.

Grand Champion Cym.—*Dorchester* 'Jeanette', Mr. J. Rentoul.

Reserve Champion Cym. — *Girrahween* 'Enid', Mr. R. Martin.

Best Group of Three Cymbidiums, Three Distinct Colours—*Dorchester* 'Jeanette', *Girrahween* 'Gloria' and *Istanbul* 'Isobel', Mr. J. Rentoul.

Best Pink Cym.—*Aldis Lamp*, Mr. J. Rentoul.

Best Red Cym.—*Ceres* 'F. J. Hanbury', Mr. R. Murray.

Best Green Cym.—*Pauwelsii* x *Appollo*, Mr. W. Wright, Jnr.

Best Yellow Cym.—Swallow 'Daffodil', Mr. W. Wright, Jnr.

Best Westonbirt Type Cym.—*Arabella* 'Magnificent', Mr. D. McNamara.

Best Any Other Colour Cym.—*Alex Album* x *Alex Perfection*, Mr. H. Nelson.

Best Specimen Cym.—*Sussex* 'Ramboda', Mr. R. Martin.

Best Decorative Cym.—Joyance 'Cinnamon', Mr. R. Martin.

Best Cym. Seedling—Lady Moxham, Mr. H. Nelson.

Best Specimen other than Cym.—*Den. Kingianum*, Mr. J. Garton.

Best Australian Native Orchid—*Cymbidium*

Caniculatum, Mr. & Mrs. H. Schultze.

Best Any Other Genera not Listed—*Vanda Honolulu*, Mr. & Mrs. H. Schultze.

Best Cyp.—*Menthule* 'Cordelia', Mr. A. Kirkbright.

Best Odont. or Allied Genera—*Aphrodite* x *Derwent*, Mr. A. Holland.

Best Cat. or Allied Genera—*Cat. Thetus* x *L.C. Windermere*, Mr. R. A. Grant.

Best Dend.—*Nobile Type*, Mr. & Mrs. H. Schultze.

Best Cym. by a Novice—Swallow 'Soulangiana', Mr. J. Read.

Best Any Other Genera by a Novice—*Vanda Suavis* x *Sanderiana*, Mr. C. O'Hanlon.

—W. Plymin, Hon. Secretary.

• *WARRINGAH ORCHID SOCIETY*:—Sir John Hall Best, the President of the Orchid Society of N.S.W., opened the Sixth Annual Exhibition of the Warringah Orchid Society, which was held in the Mosman Town Hall on Thursday and Friday, the 21st and 22nd August, 1958. The sustained interest in orchids was very gratifying and the very fine display of flowers a credit indeed to the exhibitors. Additional to the competitive classes the non-competitive exhibits of orchids and foliage plants by Mr. W. A. Englart and the Dos Pueblos Orchid Company helped greatly in the presentation of the Show. Two items of significance were the increased attendance and the keen interest and enquiry by the visitors. The prize winners were as follows:

SPECIAL PRIZES

Champion Cymbidium—*Sussex* 'Laelia Sasso'—Mr. N. Wyborn.

Reserve Champion—Swallow 'Soulangiana'—Mr. J. Mackinney.

Best Specimen Cymbidium—*Ionia* 'Katoomba'—Mr. J. Mackinney.

Best Coloured Cymbidium—*Iris Hepburn* 'Avalon'—Mr. R. W. Hall, 1st; *Woodpigeon*—Mr. S. G. Cooke, 2nd.

OPEN SECTION

Best Three Cymbidiums—Distinct Varieties—Mr. S. G. Cooke, 1st; Mr. E. Longley, 2nd.

Best Three Coloured Cymbidiums—Distinct Colours—Mr. R. W. Hall, 1st; Mr. H. Cooney, 2nd.

Best Six Cymbidiums—Mr. J. Mackinney, 1st; Mr. R. W. Hall, 2nd.

Best Two Decorative Cymbidiums—Mr. S. G. Cooke, 1st; Mr. H. Cooney, 2nd.

Best Australian Raised Seedling—Mr. S. G. Cooke.

Best Display of Orchids—Mr. R. Trenerry.
 Best Australian Native Orchid—Mr. C. M. Taylor, 1st; Mr. R. E. Greenwood, 2nd.

Best Cattleya—Mrs. F. G. Spurway, 1st; Mr. W. Breakell, 2nd.

Best Cypripedium—Mr. E. F. Moffatt, 1st and 2nd.

Best Orchid Not Otherwise Classified—Mr. R. E. Greenwood, 1st; Mr. A. R. Persson, 2nd.

Best Miscellaneous Group of Three Genera—Mrs. F. G. Spurway.

MEMBERS' SECTION

Best Cymbidium Exhibited by a Member—Mrs. I. Lawrence.

NOVICE

Best Cymbidium—Dr. John Mutton, 1st; Mrs. M. Barber, 2nd.

Best Coloured Cymbidium—Dr. John Mutton, 1st and 2nd.

The W. W. Kavanagh Trophy—Lady Members—Mrs. M. Barber.

The Medal of the Orchid Society of N.S.W., presented to the Society for award to a member exhibiting at the Annual Show was won by Mr. C. M. Taylor.

The meetings of the Society are held on the third Friday in each month in St. Paul's Church Hall, Ellery Parade, Seaforth. The Hon. Secretary is Mr. A. H. Barber, 10 Bene-long Road, Cremorne.

• **PARRAMATTA AND DISTRICT ORCHID SOCIETY:**—Two halls opening into each other on the roof of Grace Bros.' Building gave the Parramatta and District Orchid Society the largest space it has yet had for its three-day September Show. The lighting was perfect day and night, and the elevated setting distinctive. The Committee considers the standard of the entries the highest in the history of the Society.

Arranging of the display of orchids and foliage plants along one side of the hall gave the visitor the first impression that he was entering a long hot house. Mr. A. J. Webb's winning exhibit was a blaze of colour against softer green tones. The rival entries maintained a high standard, and Mrs. G. Daniel's prize-winning entry for the best exhibit of Cymbidiums was almost a foliage display by itself. A further contribution to spectacular effect was made by the Committee in staging the miscellaneous classes as a decorative display. Special mention must be made of a large non-competitive entry by Messrs. S. A. and R. E. Batch-

lor of tastefully-arranged Cymbidiums, which challenged comparison with the competitive classes.

Those constant rivals Cyms. Dorchester 'Jeanette' and Balkis 'Luath', fought it out for the Grand Championship. Mr. A. J. Webb won with the first mentioned, carrying seven large blooms spotlessly white. Scarcely inferior was Mrs. G. Daniel's Cym. Balkis 'Luath' carrying nine blooms. It is a pity the exigencies of classification placed these notable plants at almost extreme points of the halls, making close comparison difficult.

Results:

Grand Champion Cymbidium—Dorchester 'Jeanette', Mr. A. J. Webb.

Reserve Champion—Balkis 'Luath', Mrs. G. Daniel.

Best Specimen Cymbidium—President Wilson with more than twelve long spikes, Mr. H. Heise.

Best Coloured Cymbidium—Esmerelda, Mr. E. Hill.

Best presented exhibit of three to six Cymbidiums—Mrs. G. Daniel.

Best Cymbidium Seedling—Mr. C. Lawrence.

Group of Three Cymbidiums for Colour—Stonechat, Astra 'Violet Clapton' and Mayfair 'Collaroy', Mr. R. Miller, 1st; Lowi-concolor x Goosander, Promona 'Tanandra' and Esmerelda, Mrs. G. Daniel, 2nd.

Best Cattleya—Grand Monarch, Mr. S. Mills.

Best Cypripedium—Anita, Mr. A. Yee.

Best Dendrobium—Nobilius, Mr. E. Pauley.

Best other variety—Mr. S. Mills.

Display of Orchids and Foliage Plants—Mr. A. J. Webb, 1st; Mr. & Mrs. E. Pauley, 2nd; Mr. S. Mills, 3rd.

Group of Three Cymbidiums—Swallow 'Soulangeana', Balkis 'Luath' and Girraheen 'Enid', Mr. A. Cook, 1st; Balkis 'Luath', Swallow 'Soulangeana' and Princesse Astrid 'Dorothy', Mrs. G. Daniel, 2nd.

Best Red Cymbidium—Iris Hepburn, Mr. G. Lynch.

Best Yellow Cymbidium—Ethel Hart, Mr. Layman.

Best Green Cymbidium—Gossoon 'Kabarli', Mr. G. Lynch.

Best Cymbidium exhibited by Lady Member—Balkis 'Patricia', Mrs. G. Daniel, 1st; Louis Sander 'Kirribilli', Mrs. Layman, 2nd.

Best Decorative Cymbidium—Mrs. G. Chivers, 1st; Mr. H. Heise, 2nd.

Best Australian Native Orchid—Dend. *Aemulum*, Mr. K. B. Wilson, 1st; Dend. *Speciosum*, Mr. H. Heise, 2nd.

Shoulder Spray of Cymbidiums—Mrs. A. Griffiths, 1st; Mrs. H. Charnock, 2nd.

Best Non-Competitive Display—Messrs. S. A. and R. E. Batchelor.

Most Successful Exhibitor—Bronze Medalion donated by N.S.W. O.S., Mrs. G. Daniel. *Novice*:

Best Cymbidium—Girrahween 'Enid', Mr. R. Perkes, 1st; Princesse Astrid 'Dorothy', Mrs. G. Chivers, 2nd.

Best Red Cymbidium—Promona 'Tanandra', Mr. R. Perkes.

Best Yellow Cymbidium—Swallow 'Daffodil', Mr. K. Vicary.

Best Green Cymbidium—Esmerelda, Mr. E. Hill.

Best Orchid other than Cymbidium—Cypripedium Apollo, Mr. G. Lynch.

Display of Orchids and Foliage Plants—Mrs. W. J. Corry.

—C. E. Sligo, 29 Church St.,
Castle Hill, N.S.W.

• NEWCASTLE ORCHID SOCIETY:—

1958 Orchid Festival Results:

Section 1:

Grand Champion Cym. of Show—Girrahween 'Enid', W. Redriff.

Reserve Champion Cym.—Balkis 'Luath', J. Brice.

Grand Champion Orchid any Other Variety—Den. Sunburst 'Eliz. Ann', G. Deane.

Club Champion Cym.—Girrahween 'Enid', W. Redriff.

Best Red Cym.—Cyzara 'Merrilong', G. Roberts.

Best Yellow Cym.—Primula, W. Redriff.

Best Green Cym.—Southborough, W. Redriff.

Best Any Other Cym.—Princesse Astrid 'Dorothy', J. W. Smith.

Best Decorative Cym.—Cygnus 'Janet', W. J. Falkes.

Section 2:

Six Cymbidiums—B. A. Hestlow 1st; G. Collins 2nd.

Two Cymbidiums—G. Deane 1st; J. Bryce 2nd.

One Cymbidium—Dorchester 'Jeanette', G. Roberts 1st; Balkis 'Luath', B. A. Hestlow 2nd.

Three Cymbidiums for Colour—N. Pender 1st; W. Redriff 2nd.

Three Cymbidiums Decorative—W. J. Falkes, 1st; B. A. Hestlow 2nd.

Best Cyp.—April, Mrs. M. Thompson 1st; Falstaff, G. Roberts 2nd.

Best Cattleya—Venus, W. McDougall 1st; L.C. Hasselii x C. Enid, Mrs. C. McGilvery 2nd.

Best Den.—Sunburst 'Elizabeth Ann', G. Deane 1st; Harefield Hall, Mrs. A. Sinclair 2nd.

Special Award—Ballianum—Mrs. C. McGilvery.

Best Any Other Variety—Vanda Gilbert Triboulet, Mrs. A. Sinclair 1st; Vanda Flameroles, Mrs. M. Thompson, 2nd.

Best Australian Native—Den. Kesteveni, Mrs. A. Sinclair 1st; Den. *Fusiforme*, Mrs. A. Sinclair 2nd.

Best Display of Orchids—O. Towndrow 1st; G. Roberts 2nd; W. Hollingshead 3rd.

Best Cym. Seedling—Virginia Knight, W. Redriff, 1st; Madder Rose x A.W.B., B. Watkins 2nd.

Members' Novice Section:

Two Cymbidiums—Mrs. W. Odgers 1st; N. Reay 2nd.

One Cymbidium—Balkis 'Luath', L. Hamilton 1st; Girrahween 'Enid', Mrs. G. Roberts 2nd.

Best Green Cym.—Esmerelda No. 1, Mrs. W. Odgers 1st; Esmerelda, R. L. Judd 2nd.

Best Red Cym.—Sparta 'Etna', Mrs. G. Roberts 1st; Susette 'Perfection', F. Goodman 2nd.

Best Yellow Cym.—Swallow 'Daffodil', W. McDougall 1st; Swallow 'Daffodil', D. Campbell 2nd.

Best Any Other Colour—Joyance 'Cinnamon', R. J. Slade 1st; Euterpe 'Churchill', K. Cooper 2nd.

Best Decorative Cym.—Miranda 'Maisie', W. Tavener 1st; Cygnus, Mrs. E. Wilkins 2nd.

Best Cym. by a Junior—Dorchester 'Kingsford', K. Towndrow 1st; Flamingo, L. Campbell 2nd.

Best Shoulder Spray—Mrs. N. Pender 1st; Mrs. J. Perry 2nd.

Best Vase of Orchids—Mrs. A. Hagon, 1st and 2nd.

—W. R. Tavener.

• *VICTORIAN AWARDS FOR 1956, 1957 and 1958:*—

- 1/9/56. Cym. Mem. Albertii 'Albert'. H.C.C. Mr. J. Allan.
 1/9/56. Cym. Cyzara 'Remembrance'. A.D. Mr. C. Davis.
 11/9/56. Cym. Priam 'Ada Meech'. A.D. Capt. & Mrs. Cole.
 11/9/56. Cym. Carisbrook 'Florence'. A.D. Mr. H. R. Martin.
 11/9/56 Cym. Aldis Lamp 'Picardy'. A.D. Mr. L. Gardiner.
 11/9/56. Cym. Icarus 'Yellow Gem'. A.D. Hodgins Orchids.
 11/9/56. Cym. Esmerelda 'Mathcott'. A.D. Mathieson & Scott.
 11/9/56. Cym. Flare 'Dell Park'. A.D. Mr. G. McGrath.
 11/9/56. Den. Model 'Astron'. H.C.C. Mr. D. V. McNamara.
 11/9/56. L.C. Cavalese 'Wandin'. A.M. Mr. P. Dyson.
 11/9/56. Cyp. Menthule 'Cordelia'. A.M. Mr. A. Kirkbright.
 29/9/56. Cym. Promona 'Tanandra'. A.D. Mr. J. Allan.
 18/5/57. Cat. Corisande x Swordfish. H.C.C. Mr. G. Leverett.
 15/7/57. V. Onomea 'Marjorie'. A.M. Mr. A. Kirkbright.
 2/9/57. Cyp. Bordube x Denhurst. A.M. Mr. P. Bradley.
 1/10/57. Cat. Bow Bells 'Langley'. A.M. Dr. R. Harvey.
 21/10/57. Cym. Sussex x Bodmin Moor. H.C.C. Mr. G. Fraser.
 16/12/57. V. Rothschildiana. H.C.C. Mr. C. Davis.
 30/6/58. L.C. Gordon Hoyt. H.C.C. Dr. R. Harvey.
 21/7/58. Cyp. Bruno x Ballet Girl. H.C.C. Hodgins Orchids.
 21/7/58. Cyp. Alamo 'Warringal'. H.C.C. Mr. W. Wright, Jnr.
 9/8/58. Cyp. Bonita x Margaret Brands 'Mem. R. Vick'. A.M. Mr. W. Wright, Jnr.
 18/8/58. Cym. Girraheen 'Gloria'. H.C.C. Mr. W. Wright, Jnr.

Cultural Certificates:

- 11/9/56. Cyp. Invincible. Mr. J. Allan.
 1/10/57. Lycaste Skinneri. Capt. & Mrs. Cole.

• Articles are urgently needed for the A.O.R. Why not write of your experiences with orchid growing and send them to the Editor?

• *N.S.W. ORCHID SOCIETY LTD. AWARDS:*—Continued from Vol. 23, No. 2, June, 1958.

- Reg. No. 372.—B.C. Déesse x C. Memoria Rosemary 'Wondabah'. H.C.C. L. Giles. 26/5/58.
 Reg. No. 373.—Cat. General Patton 'Balmoral'. H.C.C. A. Persson. 26/5/58.
 Reg. No. 374.—Cat. Bob Betts 'Bexley'. H.C.C. F. Slattery. 30/6/58.
 Reg. No. 375.—Cat. Hertha 'Rosemont'. A.M. J. Chapman. 28/7/58.
 Reg. No. 376.—Cat. Geisha 'Rapallo'. H.C.C. J. Chapman. 28/7/58.
 Reg. No. 377.—Cym. Joan Luth 'Joy'. H.C.C. B. Schwartz. 19/8/58.
 Reg. No. 378.—Cym. Starlight 'Crown'. A.M. R. Gerathy. 25/8/58.
 Reg. No. 379.—Cym. Independence Day 'Beryl Jean'. H.C.C. S. Cooke. 25/8/58.
 Reg. No. 380.—Cym. Iris Hepburn 'Avalon'. A.D. R. Hall. 25/8/58.
 Reg. No. 381.—Cat. Galliard 'Rapallo'. H.C.C. J. Chapman. 25/8/58.
 Reg. No. 382.—Cyp. Madge-le-Gros 'Windsor'. H.C.C. Mrs. S. Hayter, 25/8/58.
 Reg. No. 383.—Cym. Robin Redbreast 'Lilyvon'. A.D. A. Chalmers. 15/9/58.
 Reg. No. 384.—Van. Rothchildiana 'Eva Bonnyman'. F.C.C. B. Bonnyman. 15/9/58.
 Reg. No. 385.—Phal. Sachesis 'Balmoral'. H.C.C. A. Persson. 15/9/58.
 Reg. No. 386.—Cym. Dorchester 'Jeanette'. F.C.C. H. Pearson. 15/9/58.
 Reg. No. 387.—Cym. York 'Lady Slim'. A.M. Dos Pueblos Orchid Company (Aust.) Pty. Ltd. 15/9/58.
 Reg. No. 388.—Cym. Miretta 'Matchless'. A.D. F. Slattery. 15/9/58.
 Reg. No. 389.—Silver Medal. Mrs. K. C. Thompson. 16/9/58.
 Reg. No. 390.—Bronze Medal. F. Jones. 16/9/58.
 Reg. No. 391.—Silver Medal. Dos Pueblos Orchid Company (Aust.) Pty. Ltd.
 Reg. No. 392.—Cym. York 'Margaret Olive'. H.C.C. R. Sands. 12/10/58.

• *ORCHID SOCIETY OF WESTERN AUSTRALIA:*—The W.A. O.S. held its Spring Orchid Festival in the Perth Town Hall on the 2nd and 3rd October, 1958. Everybody acclaimed it "The greatest success ever." A big improvement in numbers, cultivation and quality of the Cymbidiums was very con-

spicuous, although the lighter shades greatly predominated.

This being our first competitive Cymbidium Show, keener interest prevailed, with the usual criticism of the various plants and growers' methods.

The results were as follows:

Champion Cym.—Miranda 'Maisie', A. C. Dawson.

Reserve Champion Cym.—Swallow 'Daffodil', K. Birk.

Champion Cat.—S. P. Hall.

Champion Cym., Novice Section—Princess Elizabeth 'Adamsons', R. D. Brown.

Reserve Champion Cym., Novice Section—Morvyth, H. Hill.

Best White Cym.—Cassandra 'Warrigal', J. Brassington, 1st; Eagle 'Snow Queen', A. C. Dawson, 2nd.

Best Yellow Cym.—Miranda 'Maisie', A. C. Dawson, 1st; Swallow 'Daffodil', K. Birk, 2nd.

Best Pink or Red Cym.—Princess Elizabeth 'Maisie', A. C. Dawson, 1st; Princess Elizabeth 'Maisie', R. Harrison, 2nd.

Best Any Other Colour Cym.—Jeanette, K. Birk, 1st; Emery, A. C. Dawson, 2nd.

Best Two Cymbidiums—Alexanderi and Plover, K. Birk, 1st; Sandpiper and Toucan, J. Brassington, 2nd.

Best Cat.—C. Napier x Dupreana, J. P. Hall, 1st; B.C. Warnham Beauty, A. C. Dawson, 2nd.

Best Cyp.—Cameo, A. C. Dawson, 1st; Grassington, A. C. Dawson, 2nd.

Best Dend.—H. Mercer, 1st and 2nd.

Best Australian Native—H. Mercer, 1st and 2nd.

Best Any Other Variety—Vanda unnamed, A. Pierce, 1st; Selenipedium Grande, H. Mercer, 2nd.

Display of Orchids and Foliage Plants—H. Smethurst, 1st; A. C. Dawson, 2nd.

Tanbark, in the culture of Cymbidiums in Western Australia, is conspicuous by its absence. The local tanneries use Mallet bark, which is not satisfactory, and Wattle bark imported from the eastern States is too costly at 30/- per bag C.I.F.

Practically all our Cymbidiums are grown in bush leaf mould, with each grower's own ideas of what additives are necessary and, although the quality of the blooms is certainly not up to the standards of the eastern States, we are confident that the time is not far distant when it will be.

The Western Australian light and summer heat hazards have been practically overcome by the "Malley Hen" method, i.e., all the leaf mould roughage raked up to the top of the pots and kept damp, the pots standing on the ground, with fifty per cent. shading in summer and full exposure to all weathers from the end of April to the end of September. Our leading growers are now consistently flowering seventy-five per cent. of their plants.—A. C. Dawson.

• ST. GEORGE ORCHID SOCIETY:—

In conjunction with Hurstville Lions' Club, the Annual Show was once again the outstanding horticultural presentation in the district.

The complete result with the names of the plants should once again interest new growers.

Special Prizes:

Champion Cymbidium—Balkis 'Luath'—Mr. S. Cooke.

Reserve Champion Cymbidium—Balkis 'Luath'—Mr. S. Cooke.

Best Coloured Cymbidium—Erica x Radak—Mrs. S. Hayter.

Best Decorative Cymbidium—Glenbrook 'Girrahween'—Mr. L. A. Peaty.

Best Cymbidium exhibited by a Member—Max Hoffman Memorial Trophy—Balkis 'Luath'—Mr. S. Cooke.

Best Coloured Cymbidium excepting White—O.S. N.S.W. Silver Medal—Erica x Radak—Mrs. S. Hayter.

Best Orchid other than a Cymbidium—Mr. and Mrs. A. W. Buckley Trophy—Odontioda Argia x Marie Antoinette—Mr. L. A. Peaty.

Open Section:

Group of Three Cymbidiums, Distinct Colours—Sussex 'Laelia Sasso', Balkis 'Luath' and Memoria Albertii—Mr. S. Cooke, 1st; Cassandra 'Snow Queen', Girrahween 'Gloria' and Istanbul 'Isobel'—Mr. A. Gillson, 2nd.

Group of Two Cymbidiums, Distinct Varieties—Balkis 'Luath' and Sussex 'Laelia Sasso'—Mr. S. Cooke, 1st; Dorchester 'Jeanette' and Balkis 'Luath'—Mrs. S. Hayter, 2nd.

Group of Three Cymbidiums for Colour—Esmerelda, Woodpigeon and No. 54—Mr. S. Cooke, 1st; Euterpe 'Churchill', Erica x Radak and Swallow 'Daffodil'—Mrs. S. Hayter, 2nd.

Group of Four Decorative Cymbidiums—Erica Sander 'Sailor Bay', Carisbrook No. 27, Jacqueline and Altair 'Luath'—Mr. A. Gillson, 1st; Charm 'Elegance', Glenbrook 'Girrahween', Swallow 'Magnolia' and Celia x Rusper—Mr. L. A. Peaty, 2nd.

Best Cymbidium Suitable for Export—Cyg-

nus 'Opalescence'—Mr. S. Cooke, 1st; Gloriana 'Tudor Rose'—Mr. M. Lowry, 2nd.

Best Cymbidium Seedling—Cariga x Janette—Mrs. E. Randell, 1st; Ceres x A.W.B.—Mr. H. Fleming, 2nd.

Best Native Orchid—Dendrobium canaliculatum—Mr. J. Scott, 1st; Dendrobium speciosum—Mr. W. Jones, 2nd.

Best Cattleya—B.C. Nigrum x B.L.C. Mosiana—Mr. J. Lawler, 1st; B.C. Triumph—Mrs. S. Hayter, 2nd.

Best Cypripedium—Londinum 'Mascot'—Mr. E. F. Moffatt, 1st; Madge Le Gros 'Windsor'—Mrs. S. Hayter, 2nd.

Best Dendrobium—Den. Jamesianum—Mr. J. Lawler.

Best Vandaceous—Ascocentrum Ampullaceum—Mr. J. Scott.

Best Phalaenopsis—Schilleriana—Mr. J. Lawler.

Best Orchid not elsewhere included—Lycaste Skinneri—Mrs. S. Hayter.

Display of Orchids and Foliage Plants, Min. 6ft. x 4ft.—Mr. J. Lawler, 1st; Mr. E. Moffatt, 2nd.

Members' Section:

Best Cymbidium—Balkis 'Luath'—Mr. S. Cooke.

Best Coloured Cymbidium—Carisbrook 'True Rose'—Mr. M. Crutch.

Group of Two Cymbidiums, Distinct Varieties—Balkis 'Luath' and Istanbul 'Isobel'—Mr. S. Cooke, 1st; Dorchester 'Jeanette' and Istanbul 'Isobel'—Mr. B. Schwartz, 2nd.

Group of Three Cymbidiums, Distinct Colours—Lyasias 'Chastity', Jason 'Mablethorpe' and Irish Melody—Mr. S. Cooke, 1st; Memoria Albertii 'Albert', Cygnus 'Opalescence' and Edzell 'Elizabeth'—Mr. L. Peaty, 2nd.

Group of Three Cymbidiums for Colour—Swallow 'Daffodil', Stonechat 'Eloëura' and Mayfair x Rio Rita—Mr. S. Cooke, 1st; Canary, Sunrise 'Brilliance' and Swallow 'Daffodil'—Mr. H. Fleming, 2nd.

Best Coloured Cymbidium—Red—Carisbrook 'Brick'—Dr. J. Crakanthorp.

Best Coloured Cymbidium—Green—Midlothian 'Greensleeves'—Mr. S. Cooke.

Best Coloured Cymbidium—Yellow—Woodpigeon—Mr. W. Gould.

Best Specimen Cymbidium—Ispahan 'Mascot'—Mr. W. Gould; Edzell 'Elizabeth'—Mr. S. Cooke—Special Award.

Display of Orchids and Foliage Plants, max. 5ft. x 3ft.—Mr. L. Peaty, 1st; Mr. H. Crutch, 2nd.

Best Cattleya—B.C. Cliftonii—Mr. A. Birdsall, 1st; L.C. Gaillard—Mr. L. Peaty, 2nd.

Best Dendrobium—nobile—Mr. J. Scott, 1st; Occulatum—Mr. L. Peaty, 2nd.

Best Orchid not elsewhere included—Oda. Argia x Marie Antoinette—Mr. L. Peaty, 1st; Lycaste Skinneri—Mr. J. Scott, 2nd.

Best Display of Foliage Plants—Mr. E. Jones.

Novice Section:

One Cymbidium—Balkis 'Luath'—Mr. M. Crutch, 1st; Ispahan 'Mascot'—Mr. R. Berry, 2nd.

Group of Two Cymbidiums, Distinct Varieties—Princesse Astrid and Swallow 'Daffodil'—Mr. W. Gould, 1st; Edzell 'Elizabeth' and Ispahan 'Mascot'—Mr. M. Gibbens, 2nd.

Group of Three Cymbidiums for Colour—Carisbrook 'True Rose', Swallow 'Daffodil' and Bodmin Moor 'Gwenda'—Mr. M. Crutch.

Group of Three Decorative Cymbidiums—Swallow 'Daffodil', Swallow 'Magnolia' and Erica Sander 'Sailor Bay'—Mr. M. Lowry, 1st and 2nd.

Best Coloured Cymbidium—Red—Carisbrook 'Brick'—Mr. R. Dobinson.

Best Coloured Cymbidium—Green—Midlothian 'Greensleeves'—Mr. R. Dobinson.

Best Coloured Cymbidium—Yellow—Swallow 'Daffodil'—Mr. F. Marsh.

Best Orchid other than a Cymbidium—Coelogyne—Mr. R. B. Lowe.

Decorative Section:

Best Shoulder Spray—Mrs. E. Menzies, 1st; Mrs. R. Jones, 2nd; Mrs. E. Menzies, 3rd.

Container of Orchids suitable for Vestibule—Mrs. E. Menzies.

Container of Orchids suitable for Mantle-piece—Mrs. L. Peaty, 1st; Mrs. L. Peaty, 2nd.

• It is to be hoped that the resignation of Mr. Frank Slattey from the Orchid Society of N.S.W. Committee will be only a temporary one.



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

"Orchids in Australia"

by Fred Moulen

On Sale at
All Booksellers or from

Austral-Edita Pty. Ltd.
55 McElhone Street, Sydney

Price £6/6/- plus 3/- post.
Please add exchange to cheques

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.

D. Chrysotoxum, 30/-. Yellow.

D. Dalhousianum, 30/-. Cream and
fawn.

D. Formosum, 30/-. White & yellow.

D. Nobile, 30/-. Purple.

D. Moschatum, 30/-. Apricot.

D. Pierardii, 30/-. Pale mauve.

D. Hildebrandii, 30/-. White &
yellow.

D. Densiflorum, 25/-. Yellow.

D. Jamesianum, 25/-. White & red.

D. Primulinum, 25/-. Pale to dark
mauve.

D. Fimbriatum, var. occulatum, 25/-.
Yellow, maroon throat.

D. Farmerii, 20/-. Pale Pink.

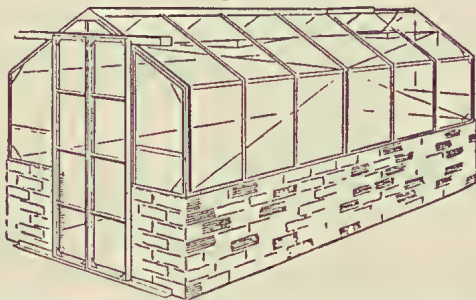
AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet

Price: £91-6-0

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

NEW ADDRESS

All Orchid Friends and Correspondents please
note I have moved from Lane Cove. Future
address will be

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE, N.S.W.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

CYMBIDIUM SEED FOR 1959

Dainty x Babylon, Castle Hill. FCC-RHS.	John Blowers x Cleo Sherman.	vale.
Dainty x Joan of Arc, Northvale, Bronze/C.	John Blowers x Babylon, Castle Hill. FCC-RHS.	Vale of Kashmir x Babylon, Castle Hill.
Blue Smoke x Great Day, Orion.	Miracle x Joan of Arc, Northvale.	Two flask packet \$10.00 each.
Blue Smoke x Joan of Arc, Northvale.	Miracle x Babylon, Castle Hill. FCC-RHS.	Babylon, Castle Hill x Joan of Arc, N.
Claudona, Lesh. x Joan of Arc, Northvale.	Miracle x Great Day, Orion.	Joan of Arc, Northvale x Balkis, Silver Orb.
Cremona, B.P. x Joan of Arc, Northvale.	Ortin x Babylon, Castle Hill. FCC-RHS.	Joan of Arc, Northvale x Self.
John Blowers (red) x Balkis, Silver Orb.	Ortin x Joan of Arc, Northvale.	Pauwelsii, C.D.H. x Joan of Arc, Northvale.
John Blowers x Joan of Arc, Northvale.	Pearl, Mag, FCC-RHS. x Joan of Arc, Northvale.	Two flask packet \$15.00 each.
John Blowers x Pauwelsii, C.D.H. FCC-RHS.	Susette, perAH-RHS. x Joan of Arc, Northvale.	Seed pods maturing Jan. and Feb.
John Blowers x Great Day, Orion.	Vale of Kashmir x Joan of Arc, Northvale.	Please make second choice. Seed air mailed.
		Joan of Arc, Northvale. 5¼ x 1½ x 1 7/16

Willard E. Graves

2743 Kelton Ave., Los Angeles 64, California.

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bend (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

Books For Christmas Gifts

SUCCESSFUL ORCHID CULTURE (P. R. C. Rittershausen). Illst. 18/9. Post 1/3d.
ORCHID HANDBOOK. (Compiled John Bisset and others, for Orchid Soc. of N.S.W.) Illst., 8/6. Post 6d.
ORCHIDS & THEIR CULTIVATION (David Sander). Illst. £1/9/-. Post 1/3d.
YOU TOO CAN GROW ORCHIDS (Handcock & Smith). Illst. 16/6d. Post 6d.
ORCHIDS AS HOUSE PLANTS (R. T. Northen). Illst. £2/5/-. Post 1/6d.
ORCHIDS (Lecoufle & Rose). Col. plates, £1/8/3. Post 1/3d.
ORCHIDS IN AUSTRALIA (Fred Moulen) 100 superb colour plates, full cultural methods. £6/6/-. Post 2/-.
100 INDOOR PLANTS—Their Care & Cultivation. (A. C. Muller-Idzerda). Illst. 17/6d. Post 7d.
JAPANESE FLOWER ARRANGEMENT (E. G. Allen). Illst £1/0/9. Post 7d.
THE ART OF GROWING MINIATURE TREES, PLANTS & LANDSCAPES (T. Ishimoto). Illst. £1/10/6. Post, 1/3d.
SIMPLE PRACTICAL HYBRIDISING FOR BEGINNERS (D. G. Thomas). Illst. 18/9d. Post 1/-.
SOIL-LESS GARDENING FOR FLAT & HOME (Maxwell Bentley). Illst. £2/-/-. Post 1/-.
BRUNNING'S AUSTRALIAN GARDENER, 34th completely revised edition. Illst. £1/10/-. Post 1/3d.
We search the world successfully for Rare and Out-of-print Books.
Also New and Second-hand Books on Australian, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.
We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.
10X British Aplanatic folding Magnifiers—of great use to Orchid lovers. £2/18/6.

Write for Christmas Lists.

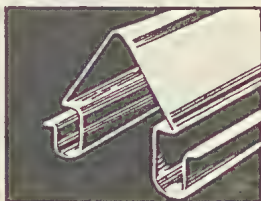
N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931

49 Aird Street, Parramatta — YL9961

135 Forest Rd., Hurstville — LU2066

67-69 Burelli St., Wollongong—B3301-8

932 Pacific Highway, Chatswood—JA3462

Lc. Mary "Rose" Special

1965 Lc. Oakland (Lc. Buccaneer 'Swarthy' x Lc. Mary Rose 'Exquisita' A.M. A.O.S.. Solid dark purple labellum, no gold, large—Fall. £4.9.6.

2001 Lc. Sacramento (C. Prospector 'Helen Buss' x Lc. Mary Rose 'Exquisita' A.M., A.O.S.). Prolific, large, dark, well shaped flowers—Winter. £4.9.6

2006 Lc. Emily Montgomery (C. Tellus x Lc. Mary Rose 'Exquisita' A.M., A.O.S.). Very large dark—Winter to Spring. £4.9.6.

Three crosses with our Lc. Mary Rose 'Exquisita' A.M. A.O.S., all of superior proven exhibition and award quality.

Advanced plants out of 4" pots ready to pot into 6".

First bloom this Fall or Winter.

Rod McLellan Co.

1457 El Camino Real
South San Francisco, Calif.
U.S.A.

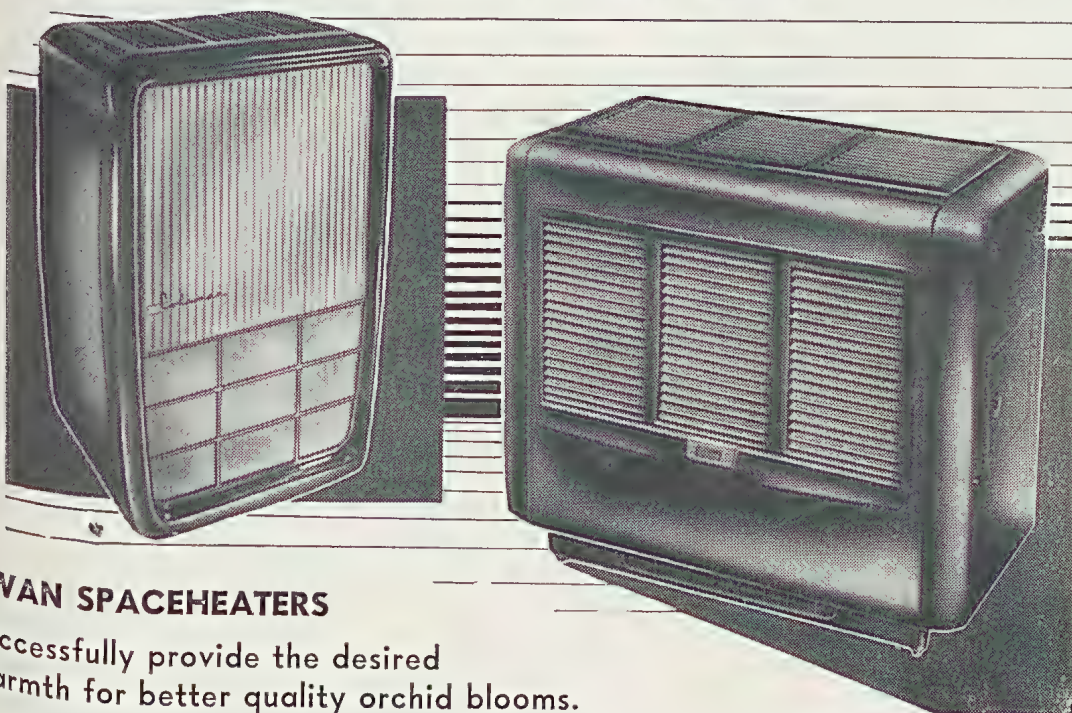


We are sharing our best in offering any TWO of these three crosses for £5.19.0. or one-third off.

Don't wait for winter...

OVERCOME YOUR GLASSHOUSE HEATING PROBLEMS
NOW AND MAINTAIN **TROPICAL TEMPERATURES**
THROUGHOUT THE COLDEST WEATHER - - - "... ..

With a **SWAN SPACEHEATER** fumes are totally
eliminated—NO MORE "BUD DROPS"



SWAN SPACEHEATERS

successfully provide the desired
warmth for better quality orchid blooms.

- No attention required • Silent operation.
- Constant temperatures maintained • Absolutely odourless

THE INEXPENSIVE FUEL OIL CAN BE
DELIVERED TO YOUR NURSERY, CITY OR
COUNTRY, BY THE MAJOR OIL COM-
PANIES.

SELECT **SWAN** FOR
YOUR **COLEMAN** HEATER
FREE SURVEY SERVICE

SWAN REFRIGERATION (DISTRIBUTORS) PTY. LTD.

Refrigeration, Heating
& Air Conditioning Engineers

93 WILLIAM STREET,
SYDNEY

FA 9318

SEND THIS COUPON NOW FOR FREE DETAILS
OF ALL GLASSHOUSE HEATING REQUIRE-
MENTS.

NAME:

ADDRESS:

O.R. 1/59.



No. 24
(See List "Limberlost" Seedlings below)

Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas



"LIMBERLOST"

Orchid Seedlings

First General Offering of Orchid Seedlings to Old and New Growers. Fascinating Hybrids that will bring both Pleasure and Profit as they mature.

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10. V. Tatzeri x V. C. Robinson.
- No. 11. V. Onomea.
- No. 13. V. M. Foster x V. G. Myamoto.
- No. 29. V. Coerulea x V. G. Triboulet.
- No. 37. V. Tatzeri x V. Coerulea.
- No. 46. V. Suavis x V. Sanderiana.
- No. 40. Phal Denevei x Arachnis Maggie-Oei.
- No. 26. V. Henrietta Ho x Renanthera Storlei.
- No. 24. D. Schroederianum bicolor.
- No. 27. D. Bromofieldii x D. J. Tanaka.
- No. 39. D. Broomfieldii x D. Phal. var. Snow White.
- No. 48. D. Helen Park.
- No. 57. D. Colin Potter.
- No. 58. D. Neo Hawaii.
- No. 149. Cymbid. Aloifolium x Cym. Bicolor.
- No. 175. D. Phal. var. Snow White x D. Aurechleii.
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei.
- No. 35. Aranda Freckles.
- No. 36. V. Henrietta Ho x Arachnis Ishbel.
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei.
- No. 60. V. Tatzeri x Arachnis Ishbel.
- No. 32. V. Dearei x V. Henrietta Ho.

Above plants 2" to 4" 7/6 each, £4/4/- per doz. (Assorted if desired).

LIMBERLOST ORCHID SEEDLINGS. Near Flowering size. 9" to 12"
25/- each, £13/10/- per doz.

- No. 26. V. Henrietta Ho x Renanthera Storlei.
- No. 13. V. Mary Foster x V. G. Myamoto.
- No. 35. Aranda Freckles.
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei.
- No. 36. V. Henrietta Ho x Arachnis Ishbel.
- No. 55. V. A. Fukunaga x Arachnis Ishbel.
- No. 60. V. Tatzeri x Arachnis Ishbel.
- No. 24. D. Schroederianum bicolor.
- No. 27. D. Curley Top.
- No. 39. D. Pauline var. Limberlost.
- No. 48. D. Helen Park.
- No. 57. D. Colin Potter.
- No. 10. V. Tatzeri x V. C. Robinson.
- No. 11. V. Onomea.

Please add 7/6 with orders to cover Air Freight and forwarding charges.
If phone number, please add.

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.O.



"LIMBERLOST" Orchid Seedlings

"ORCHIDS AND OTHER PLANTS" NEW CATALOGUE AVAILABLE, OVER 40 PAGES, COMPRISED OF 13 INDIVIDUAL LISTS COVERING A WIDE RANGE OF CULTIVATED PLANTS. INQUIRIES INVITED.

COMMUNITY POTS. 1" to 2" plants 5 seedlings of each variety per pot. 20/- per pot.

- No. 13. V. M. Foster x V. G. Miyamoto.
- No. 30. V. Henrietta Ho x Arachnis Maggie-Oei.
- No. 35. V. Dearie x Arachnis Ishbel.
- No. 36. V. Henrietta Ho x Arachnis Ishbel.
- No. 55. V. A. Fukunaga x Arachnis Maggie-Oei.
- No. 60. V. Tatzeri x Arachnis Ishbel.
- No. 57. D. Tofftii x D. Phal. var. Snow White.
- No. 193. D. Dicuophum x D. Canaliculatum var. Pallidum.
- No. 58. D. Grantii x D. Phal var Snow White.
- No. 40. Phal. Denevei x Arachnis Maggie-Oei.
- No. 134. D. Superbum (Gig.) x D. Superbum (Huttonii).
- No. 175. D. Phal. var. Snow White x D. Aurecleii.
- No. 151. V. Kon Tiki x V. Manila.
- No. 153. V. Queenie Pie x V. Manila.

- No. 141. Opsisanda K. Morley x V. Manila (141).
- No. 149. Cymbidium Aloifolium x Cym. Bicolor.
- No. 189. D. Sanders Crimson x D. P. Peterson.
- No. 200. V. Manila x V. G. Triboulet
- No. 164. V. Ellen Noa x V. Suavis.
- No. 232. D. Sanders Crimson x D. (New Guinea Antelope) 103.
- No. 136. V. Suavis x V. Manila.
- No. 142. V. Manila x V. A. Fukunaga.
- No. 147. V. Tatzeri x V. Suavis.
- No. 146. V. Tatzeri x V. Manila.
- No. 150. V. Ellen Noa x V. Manila.
- No. 166. V. A. Fukunaga x V. Denisoniana herbraica.
- No. 242. V. Diana x V. La Paloma.
- No. 254. D. Mirbellianum x D. Bigibbum.

COMMUNITY POTS. 1" to 2" plants 5 seedlings of each variety per pot. 30/- per pot.

- No. 163. D. Phalaenopsis FCC self x D. Pompador.
- No. 194. V. Teres Alba x V. Ellen Noa.
- No. 205. D. P. Peterson x D. Phal. FCC self.

- No. 237. V. Parishii Marriottiana x V. E. Noa.
- No. 258. D. Lady Hamilton x D. H. Fukumura.
- No. 227. V. Kapalani x V. Onomea.

The seedlings offered above are well established in 2½" pots and transport without any detriment to the plants. Most of the seedlings are large enough to put out into single pots.

CULTURAL NOTES FOR SEEDLINGS AVAILABLE ON REQUEST

LIMBERLOST ORCHID SEEDLINGS

No. 22. V. Ernest Fujinaga x V. Sanderiana	.....	2½"	10 6
		5"/6"	21 0
No. 25. V. Haleakala x V. Sanderiana	.....	5"/6"	21 0
No. 97. V. M. Dinger (java) x V. A. Fukunaga	.....	3"/4"	15 0
No. 31. V. Poe Poe . . . Large round shape	.....	12"	15 0

PLEASE ADD 7/6 AIR FREIGHT AND FORWARDING CHARGES FOR FIRST THREE POTS, 2/6 EACH ADDITIONAL TWO (2) POTS.

SEEDLING CULTURAL CHARTS SUPPLIED FREE ON REQUEST.

PHONE 9262

J. E. Jones,

"LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS, NTH QSLD.

UNSURPASSED QUALITY
ORCHIDS

by

(P. F. & F.)

VACHEROT & LECOUFFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and
yellow.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Primulinum, 25/-. Pale to dark
mauve.
D. Fimbriatum, var.: oculatum, 25/-
Yellow, maroon throat.
D. Farmerii, 20/-. Pale pink.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/-. Pale mauve.
D. Hildebrandii, 30/-. White and
yellow.
D. Densiflorum, 25/-. Yellow.
D. Jamesianum, 25/-. White & red.

AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney
MON., DEC. 15th MON., JAN. 26th MON., FEB. 23rd

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane
FRI., DEC. 12th FRI., JAN. 9th FRI., FEB. 13th

Patron: Sir JOHN B. CHANDLER, Swann Road, Taringa, S.W.1.

President: E. A. KNOBLAUCH, Denham Terrace, Wellers Hills, Brisbane.

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY, 59 Armentieres St., Kedron, Brisbane.

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.
MON., DEC. 15th MON., JAN. 19th MON., FEB. 16th

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide
THURS., DEC. 4th THURS., JAN. 1st THURS., FEB. 5th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: R. J. LANGDON, 8 Regent St., Millswood

Hon. Secretary-Treasurer: F. C. BRIDGE, Elizabeth St., Woodside. Phone 01, Woodside 69.

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.
FRI., DEC. 26th FRI., JAN. 23rd FRI., FEB. 27th

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Hon. Secretary: H. W. HILL, 20 Waterford St., Inglewood.

Hon. Treasurer: A. A. FARRANT, 32a Coode St., Mt. Lawley.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* Miss J. Sargison. *Hon. Secretary:* Mrs. R. F. Gee,
16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



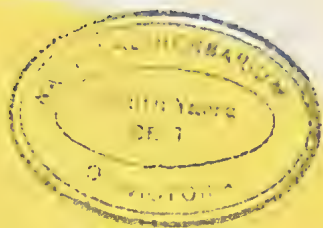
Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review



PUBLISHED QUARTERLY

VOLUME 24, No. 1

PRICE 3/6

MARCH, 1959



CYMBIDIUM MIRETTA 'MATCHLESS', A.D.

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE
QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID
CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA,
AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

... Enchanting ...



B.L.C. CAROL ADAM 'ELVIRA'

*Here is an excellent opportunity to add new varieties to your collection at reasonable cost.
They are all sturdy bush-house grown plants ex 4" pots. Lists Available.*

VANDAS. Latest American strap leaf and semi-terete types. A good variety of these plants available in various sizes. Plants offered include the famous "NELLY MORLEY" John Noa's, Original 512 cross.

CATTLEYAS. A good selection of modern hybrids nearing flowering size.

MILTONIAS. Flowering size plants. Latest French hybrids.

PHALAENOPSES. Seedlings available in pinks and whites.

CYMBIDIUMS. All the top-class awards and show varieties on hand. Also top-line scarce types namely RIO RITA 'RADIANT', F.C.C.R.H.S., MIRETTA 'MATCH-LESS', Best Green and Award of Distinction N.S.W.O.S. Festival, 1958. Marmie Kingsford 'Erin', H.C.C. Aldis Lamp 'Arncliffe', Nam Khan 'Naomi', Balkis 'Jeanette' and many others.

HUNDREDS OF BACK BULBS TO SUIT EVERYBODY

... Frank Slattery's ...

... Orchids ...

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

Good sturdy plants bush-house grown.

SUSSEX 'LAELIA SASSO' H.C.	x PEARL 'MAGNIFICUM' F.C.C.	15/-
" " " "	x MONICA 'THE FINEST'	10/-
" " " "	x ATHENS 'TANANDRA'	15/-
" " " "	x PROFITA 'LUATH' H.C.	20/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x FASCINATION No. 2 (RED)	15/-
FIREBIRD 'DOVER HEIGHTS'	x OLYMPUS 'ROSY QUEEN'	15/-
PEARL 'MAGNIFICUM' F.C.C.	x " " "	10/-
" " " "	x MIDLOTHIAN 'GREENSLEEVES'	15/-
" " " "	x ATHENS 'TANANDRA'	15/-
PINK BEAUTY	x PEARL 'MAGNIFICUM' F.C.C.	10/-
RUSPER 'WAVERLEY' A.D.	x " " "	10/-
BALKIS 'LUATH' A.M.	x CARISBROOK " " "	20/-
" " " "	x REMUS F.C.C.	20/-
" " " "	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
CARIGA 'SORRENTO'	x SWALLOW	15/-
CARIGA 'SORRENTO'	x SUSSEX 'LAELIO SASSO' H.C.	20/-
CARIGA 'JULIA'	x SWALLOW	10/-
SPARTA 'ETNA' A.D.	x CARISBROOK BRICK A.D.	10/-
LUCIFER 'DIANNE' A.D.	x PINK BEAUTY	10/-
ALEXANDERII 'WESTONBIRT' F.C.C.	x MIDLOTHIAN 'GREENSLEEVES' H.C.	15/-
" " " "	x FIREBIRD 'DOVER HEIGHTS'	15/-
" " " "	x BLUE SMOKE No. 1 (CALIFORNIA)	20/-
" " " "	x PEARL 'MAGNIFICUM' (JADE)	15/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x SPARTAN QUEEN 'MERRILONG' A.D.	15/-
PAUWELSII C. De HEMPTINE F.C.C.	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
REMUS F.C.C.	x CARISBROOK THELMA A.D.	15/-
SPARTAN QUEEN MERRILONG A.D.	x " " "	15/-
MAYFAIR F.C.C. 'STONEHURST' "	x FASCINATION 'CRIMSON' GLORY' A.D.	20/-
	x REMUS F.C.C.	15/-
	x REMUS F.C.C.	20/-

The nursery is open 7 days weekly and visitors are always welcome.

Plants are sent everywhere in Australia or overseas on request.

PLEASE SEND STAMPED ADDRESSED ENVELOPES FOR LISTS

Phone
LY7985

12 EDDYSTONE RD., BEXLEY

(off Stoney Creek Rd., opp. Bexley Park)

Phone

LY7985

... For Perfection ...



SAYONARA

Seedling flowering for the first time from our cross 4082

Apollo 'Exbury', F.C.C., R.H.S. x Nam Khan, F.C.C., R.H.S.

During the 1958 flowering season a number of Seedlings of Sayonara came into flower. From the consistently high quality of the material which we have bloomed, along with the exceptional vigorousness of the plants, we are well aware that this cross holds great promise.

Both parents, Apollo 'Exbury' F.C.C., R.H.S. and Nan Khan F.C.C., R.H.S., are of strong spike habit, each spike bearing from 15 to 30 flowers.

We are confident that this cross will prove to be an excellent investment for both the commercial man and the connoisseur. Greens may be expected, with tones of yellow and pink to prevail.

Large Seedlings, many to bloom this season.

6" Pot, £5. 10. 0. — 8" Pot, £10. 10. 0.

dos puebllos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Telephone:

98-6321

P.O. BOX 28

Situation South Creek Rd., Dee Why, N.S.W.

N.S.W.



WHITES

BLUSHES

YELLOWS

GREENS

of

SUPERIOR

QUALITIES

MARY ROEBLING

Seedling flowering for the first time from our cross 4051

Dorchester 'Alpha' A.M., R.H.S. x 'Miretta' Dos Pueblos



Limited number of seedlings for release

Ex. 6" Pot. £5 10. 0.

dos pueblos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

Mail orders are
carefully filled.
Inquiries are
invited.

Telephone:
98-6321

P.O. BOX 28

N.S.W.

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cyripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send
for Free
Price List



A section of our 30,000 plants of Vanda Joaquim.

VANDAS

Strap leaved.
Semi-terete.
Quarter terete.
Community pots to flowering size.

Send for free and
complete price list.

Send for free and
complete price list.

DENDROBIUMS

D. phalaenopsis hybrids.
D. taurinum hybrids.
D. stratiotes hybrids.
Community pots and flowering size.
Dendrobiums from India (flowering size only).

CATTLEYS
PHALAENOPSES (pink)
PHALAENOPSES (white)
EPIDENDRUMS (reed stem)
ARACHNES
ARANDAS

Send for free and
complete price list.

Send for free and
complete price list.

KIRKWOODS ORCHIDS

342 SHERIDAN ST.
CAIRNS NORTH, NTH QLD.
PHONE: 2385

ORCHID SUPPLIES from FRANK SLATTERY

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy. 32/6 per pair, plus 9d. postage

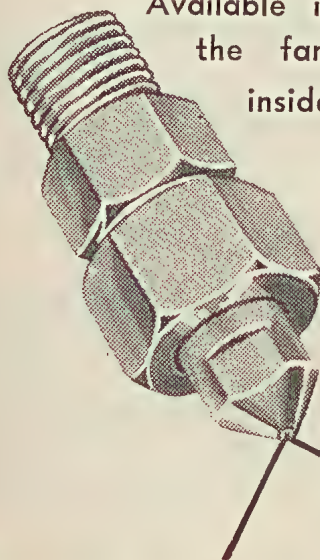
Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 8d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

Australian Topea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "MONARCH"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT
**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown Odontoglossum and Odontioda seedlings in large variety at exceptionally low prices.

Miltonia seedlings, both French and English raised.

Hawaiian Dendrobium seedlings of the best crosses, from 10/-

Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.

French and American Phalaenopsis seedlings, ranging in price from 25/- to 90/-, according to size and cross.

Intergeneric Oncidium seedlings of interest at 10/- each.

Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of Cattleya seedlings in all sizes for you to select from. These range in price from 20/- for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

JUST PUBLISHED—FREE!

How to Get Started In Orchids

*AN INTRODUCTION TO AUSTRALIA'S MOST
PROFITABLE AND FASCINATING HOBBY*

The cultivation of Cymbidium Orchids is now one of the most profitable and fascinating hobbies in many lands—and very particularly is this so in Australia and New Zealand, where climatic conditions are mostly "made-to-order" for Cymbidiums.

To help the beginner in Orchids, a new edition of our pamphlet, "How to Grow Cymbidium Orchids", has just been published. It is available free on request from the Nursery. Please write, phone or call.

Also now available free on request is a new edition of our "Catalogue and Price List of Cymbidiums", which lists the best-known official award varieties, shows the awards won and the prices of various size plants. It also gives details of special discounts available to those who obtain their plants in groups or collections.

Send today for your copies of the above and let us introduce you to some new phases of this fascinating and profitable hobby!

SPECIAL OFFER TO READERS OF THIS ISSUE OF THE "REVIEW"

ARABELLA, WAVERLEY, H.C., A.M.	HISTORIAN, LINDFIELD, H.C.	SWALLOW, DAFFODIL, H.C., A.M.
CASSANDRA, TOXTETH, A.M.	JOYANCE, CINNAMON, H.C.	PRINCESS ELIZABETH, ALLAMBIE
CELIA, TANANDRA	LOUIS SANDER, GIRRAH- WEEN	GLORIANA, TUDOR ROSE
CERES, F. J. HANBURY, A.D.	PRINCESS ELIZABETH, THE GIANT	PRESIDENT WILSON, HABERFIELD
CYGNUS, JANET	SWALLOW, CONQUEST, H.C.	
FLAMINGO, ALLAMBIE, H.C.		

Young Green Plants: For any 6 of the above varieties, £10/10/-; 12, £15; for the whole 15, £17/5/-. All plants at these prices are first-year green plants (two-seasons to flower) grown from back bulbs (with the back bulbs still attached in nearly all cases), well-established, healthy and guaranteed.

Flowering Size Green Plants: For any 6 of the above varieties, £21; 12, £30; for the whole 15, £35. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

MAIL ORDERS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

Haberfield Orchid Nursery

*The Oldest Established Commercial Cymbidium
Specialists in Australia.*

37 Dobroyd Parade, Haberfield (Sydney), N.S.W. Australia

C. W. BUSHELL, Jr.

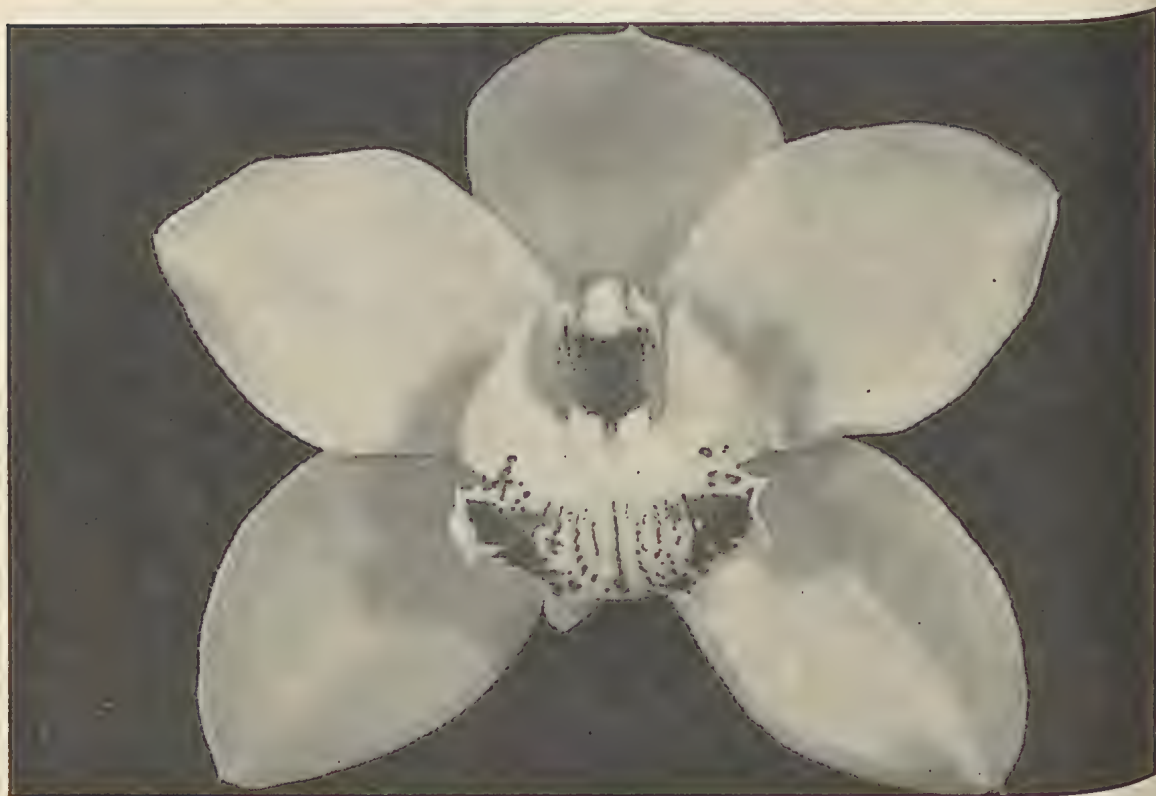
(Near Mortley Avenue)

UA5895, YX2536

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

Australian Orchid Review

VOLUME 24

MARCH, 1959

No. 1

The author of each article is responsible for the facts and opinions expressed therein.

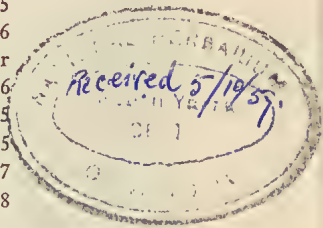
Contents

ARTICLES

Autumn Culture in N.S.W.— <i>H. J. Lawler</i>	26
Autumn Culture in Queensland— <i>A. W. F. Kurth</i>	41
Autumn Season in Victoria— <i>J. N. Rentoul</i>	22
Cymbidium Comparisons— <i>H. Jenkins</i>	16
Cymbidiums in Sydney, 1958— <i>A. B. Porter</i>	44
Cymbidiums, Our Best Fifteen, 1958— <i>E. E. Hetherington</i>	14
Front Cover	21
Judges and Judging— <i>W. W. Smoothey</i>	29
News and Notes	13, 23, 25, 37, 40, 43, 45
Orchid Culture in Western Australia— <i>A. C. Dawson</i>	24
Pauwelsii, My	12
Pests and Their Control— <i>A. W. F. Kurth</i>	38

ILLUSTRATIONS

Cattleya Bowringiana	18
Cymbidium Charmant 'Kurnbrook Glory'	36
Cymbidium Dorchester 'Jeanette' F.C.C.	18
Cymbidium Independence Day 'Beryl Jean' H.C.C.	35
Cymbidium Joan Luth 'Joy' H.C.C.	36
Cymbidium Miretta 'Matchless' A.D.	Front Cover
Cymbidium Robin Redbreast 'Lilyvon' A.D.	36
Cymbidium York 'Lady Slim'	35
Cymbidium York 'Margaret Olive'	35
Sydney Town Hall Stage	17
Phalaenopsis Sarchesis 'Balmoral'	18



Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA:

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

N. Christoph
18 Clinton Ave.
Myrtle Bank

WESTERN AUSTRALIA:

A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising, neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

My Pauwelsii

• Although it is quite obvious that orchids have to be imported to continue to improve the present quality of my relatives now residing in Australia, it has become also quite obvious that the "powers that be", who control all the phases of import licences and quarantine and treatment regulations, have finally compelled growers to lose all interest in their enthusiasm to import.

If the regulations were "framed" to prevent the entry into this country of unwanted and undesirable pests and diseases, then orchid growers should be very thankful for their forced protection. The high cost of carrying out these regulations, which is paid by the amateur orchid growers, would be something that no sane thinking person would demur at.

Long before I left England, the British Orchid Growers' Association tried everything it knew to bring the attention of the authorities in England and in Australia to the utter absurdities subsisting in the classifying (for cleanliness, etc.) of British grown orchids—carefully grown in rigidly controlled greenhouse conditions, which just *had* to be kept clean and pest-free in order to secure the many forms of health certificate required for exporting to other countries—with orchids originating in underdeveloped and undeveloped countries with no pest control system. The absurdity just shouted at you, but the authorities in this country, who had no public glasshouses at that juncture, just went along their merry way and forced growers to pay very costly charges to enjoy their hobby of improving Australian stocks of orchids, or else build a glasshouse to the plans and specifications suitable to a "public servant".

The present system of plants from all over the world being placed side by side in the one glasshouse is too silly for words. The plants which have come from rigidly controlled nurseries are now living alongside plants from any other port of call, and there they remain until the whims of authority are satisfied that the new growths are "clean".

There is no time limit for the period of our term in this gaol. We are inmates of an asylum which contains the living, the near living and, underneath each plant's compost, the dead or dying materials which cannot be removed from the plants until our costly freedom is granted. No one can put up bail for us and no redress is permissible. We are sentenced to the term of

the inspector's pleasure. It is inhuman, but who except growers of orchids would realise that we are human?

So far—in the A.O.R., I have been able to say what I think. Is not that human, or at least feminine? Or is it feline?

This country is supposed to be a democratic one, and yet—orchid growers have spent thousands of pounds improving our families without any aid from Governmental departments, only to have their precious purchases subjected to a lengthy gaol or asylum term that is quite an unnecessarily costly burden on the entire orchid fraternity, and it has been proven that the element of contagious disease caused by the "sardine-like" proximity of the gaol inmates is high and tantamount to plague by disease conditions.

Nurserymen usually charge one shilling per square foot per week for quarantine "service", a fee that is not unjust but can be very costly should plants decide to remain dormant, as is the case through the change of climes from winter to another winter, and not show the all-clear sign for virus suspect in their new growths.

Once, a year or two ago, we were released after a period of three months. Today that period is probably our penalty for private enterprise. Then our probationary period commences. We are inspected and returned to our bench as though by a furtive shoplifter who is merely pretending to purchase. It is probably a hot day, my clan can stand the excessive heat, but those poor *Odontoglossums* and *Miltonias*! Their drooped leaves tell their own story. Woe betide the owner of such plants. The plants are sitting on a pot full of "dead" compost that is used in much cooler conditions and should have been removed upon entry into this country if the regulations were meant to provide for healthy plant life.

Our probationary period may coincide with the long service leave, or a holiday period of our inspecting officer. We just remain in captivity until his return and after an inspection fee is paid we are released all ready, through no fault of our own, to spread any disease, germ or wog that we have literally been forced to carry. How many children "pick up" measles or mumps or even a bug or two upon their attendance in congested schools or hospitals?

The modern hospital has its own quarantine department for infectious diseases and an epidemic is quickly recognised by highly trained and skilled men and women who know *how to treat disease and, more important, can recognise disease when it first makes its appearance.* It would be very nice to know that the orchid family is being cared for in the same way.

Unless nurserymen are compelled to put up separate houses or separate compartments for each imported genus, and this is financially impossible, I am afraid that they will only have imported watermelons and cucumbers to grow in their quarantine houses. The period of time, the expense and the "unwashed" unhygienic conditions which now exist will cause most orchid growers to refrain from buying plants from overseas.

The average seedling *Cypripedium* or *Cymbidium* costs about 7/6 or more, no less, to quarantine for a four-month period. Apart from the 1/- per square foot per week for the nurseryman the rest is cost upon cost to the orchid growers for cartage to inspection depots and inspection fees. What, may I ask, are we being inspected for? Any nursery worthy of the name would not send a virus infected plant into this country and if a plant did come in, why condemn a whole order or shipment to be gaoled for the "Guv'ner's" pleasure? Why not inspect each shipment—a boy of tender years can recognise *suspected* virus—and release the shipment to the grower or owner so that proper care and attention can be given to the plants?

The excuses advanced for not doing this border on the ridiculous, as though Peru did really win the Davis Cup; the growers could tend their purchases with no worry as to *Odontoglossums*, etc., trying to rehabilitate themselves in a new country in sticky heat with a temperature of over 100 degrees alongside watermelons, cucumbers and *Aspidistras*.

The shipment has to be met with an import licence, a quarantine department permit, a lot of correspondence beforehand and a fervent prayer that the aircraft did not offload the shipment on the way and arrive one day late after the plants had been in Singapore heat for this particular day. (If the aircraft company denies negligence no insurance claim is possible. As if it would admit negligence anyhow!)

Surely, after all this preamble before plants arrive—and this is undertaken by the grower—all that is required is a guarantee that the plants will not be removed from the

owner's establishment for a six months period. This is all that should be required for orchids from reputable overseas nurseries, and there are many of them.

I often wonder who the "Big Brothers" are protecting. What has the orchid grower done to deserve such protection? What about us? Is it fair to treat us like guinea pigs, or are N.S.W. growers the only culprits who would break such an import quarantine regulation as I propose?

Culturally speaking,
The Editor's Pauwelsii.

• "... From time to time during the morning he plunged out into the rain for short forays along the river bank or into the nearby forest, and returned to where I was working carrying armfuls of beautiful orchids. Not only large, but tiny orchids, grew in abundance on the trees. Above my hammock rope was a tuft, six inches high, with two flowers like violets. Others higher up the trunk were like ferns or mosses, bearing small, curiously shaped and coloured flowers.

"'I have never seen a place like this,' said Basil. 'Here is *Cattleya Lawrenceana*, and this is *Schomburgkii*. These are two of the most valuable orchids there are. I know, because long ago I work for an orchid collector. I have brought a plant of each for you . . . there are plenty more . . . it is just a matter of gathering them.' . . ."

The writer was Nicholas Guppy and, with Basil, a native, he was working in an area on the borders of Brazil and British Guiana. Guppy was working on a forest project, but he wasn't an orchid grower . . . a great pity! He had no time for orchids, but at least he gave them a little time and appreciation, which is what most people do, even if they aren't flower-minded at all.

The little one with the violet-shaped flowers was *Stelis argentata*, just a name to us here in Australia. But let an orchid lover loose in a jungle area like that worked over by Guppy, and the odds are that he would throw away all his food to carry more plants out to add to his collection. Most of us miss in our orchid lives the attractive small flowers by concentrating too much on the plants that will return hard cash. Having been let loose in jungle country like that—by courtesy of the Australian Military Forces—I don't repine lost opportunities, but would welcome a return in happier circumstances.—J. N. Rentoul.

Our Best Fifteen Cymbidiums of 1958

E. HETHERINGTON

• I have been asked to write on what I consider to be fifteen of the best Cymbidiums which we flowered at Stewart's this year. A number of these questionnaires have been sent to growers in various parts of the world. It will be interesting to see what the lists contain. The list which I have compiled is intended to be a personal opinion. With so many fine Cymbidiums now appearing on the scene, it is quite difficult to select fifteen plants out of about fifty thousand. In fact, I am not going to select only fifteen, but a second list of an equal number. Frankly, I feel some of the varieties on the second list might well be in the first, and vice versa.

Selection has been based on several major points. First, of course, flower quality. Secondly, as a plant breeder, I place great emphasis on the plant's genetic structure and ability to breed fine progeny. Understandably, this is not going to enter into some other compilers' thinking at all. Third, vigour, reliability of bloom and productivity are all tremendously important. In some cases, as in Sussex Moor 'Green Mist', they have been the determining factor.

Number one on the list would be Balkis 'Silver Orb', A.M./A.O.S., Silver Medal, Cymbidium Society (Alexanderi 'Westonbirt' x Rosanna 'Pinkie'). Balkis 'Silver Orb' is a very beautiful white flower. It is a strong grower and flowers very regularly. More important than the above qualities, though, is my esteem for it as a parent.

Second. I have trained myself through the years not to show prejudice, as this can be a distinct handicap to the commercial grower who must be impartial. I am, however, going to let my prejudices show and pick Lillian Stewart 'Perfection', A.M./A.O.S. (Balkis 'Silver Orb' x Carisona 'Glendessary') as number two on the list. I choose this variety because of the magnificent large, light pink, squarish flowers that place it among the great Cymbidiums I have seen. This received Best of Show at the first big Spring Show at Watsonville, California, March, 1958.

Third is Hawtescens, A.M./R.H.S., F.C.C./R.H.S., A.M./A.O.S., Silver Medal, Cymbidium Society (Hawfinch x Lutescens). I have written about this several times in the past. For a large, luminous, greenish-yellow of magnifi-

cent quality, there are few Cymbidiums to surpass or equal it. I am confident it shall remain great for some time to come. It, incidentally, won Best of Year from the American Cymbidium Society.

Fourth. Fascination 'Red Knight' (Constance Flory x Joyful). I wish to state here that the order in which these varieties are listed does not indicate my preferences, necessarily. Fascination 'Red Knight', a hybrid derived from Constance Flory x Joyful, is one of the best reds I have seen to date. I see on checking the magazines that Fascination is winning colour awards around the world.

Fifth. Lump O'Gold 'Glitter' A.M./A.O.S. (Apollo 'Exbury' x Pearl 'Mastiff'). I cannot bring to mind a more intensely coloured, vivid bright yellow Cymbidium than this variety. It is a strong grower, a free bloomer and will probably be rated as a great Cymbidium for a number of years yet.

Sixth. Paracel 'Picture' A.M./A.O.S. (Mildred Hunter x Clarissa). I rate this fine pink variety as perhaps the best diploid I have seen. The plant bears long arching sprays of large pink flowers, each flower perfectly placed on the stem. The plant is a strong grower and a free bloomer. It should prove to be an excellent parent.

Seventh. Lillian Stewart 'Lady Rose' A.M./A.O.S. (Balkis 'Silver Orb' x Carisona). I rate this fine large pink as one of the best of the cross. It received an H.C.C./A.O.S. on one bulb and A.M./A.O.S. on two bulbs.

Eighth. Lillian Stewart 'Mona Lisa' A.M./A.O.S. (Balkis 'Silver Orb' x Carisona). This variety has been illustrated in various orchid magazines. Thousands throughout Southern California have seen it at meetings or flower shows. This particular plant is strictly what might be rated as an exhibition variety.

Ninth. Lillian Stewart 'Maxine' A.M./A.O.S. (Balkis 'Silver Orb' x Carisona). The massive five and three-quarter inch white flowers of this variety are about as large as any Cymbidium I have seen. It received its Award of Merit in May of this year as a first bloom seedling, and was exhibited by Mr. E. A. Pennington, of South Gate, California.

Tenth. Dorama 'Talisman' H.C.C./A.O.S. (Dorchester 'Alpha' x President Wilson). I place this fine creamy yellow variety on my list

for two qualities. (1) Its magnificent spray of massive yellow flowers with maroon barred lips. (2) As a tetraploid to use for breeding. Dorama 'Talisman' has an interesting parentage coming from the difficult combination of Dorchester 'Alpha' x President Wilson.

Eleventh. Vale of Kashmir 'Shalimar' (Blue Smoke 'Calumet' x Claudona). I consider 'Shalimar' to be the best variety so far of this Stewart bred green cross. Flowers are of Westonbirt hybrid size and shape, a vivid medium green with fine red barred lip. There are a number of other greens that fit this description; however, its vigour, reliability of bloom, number of flowers and floriferousness place it as a top variety in my list.

Twelfth. Mount Everest 'Heidi', H.C.C./A.O.S. (Apollo 'Exbury' x Adarissa). The vivid blue-green colouring of this variety is hard to surpass. Visitors to the Santa Barbara Show will remember it as exhibited by Mr. E. A. Edwards, of Carpenteria, California. It received an H.C.C. with seventy-eight points at that time.

Thirteenth. San Francisco 'Encore' H.C.C./A.O.S. (Blue Smoke x Balkis). This very beautiful pink variety which takes after its pollen parent, Balkis 'Silver Orb', had symmetry of shape, delicacy of colouring and reliability of bloom that places it high on my list.

Fourteenth. Alexanderi 'Cantatrice' (Alexanderi 'Westonbirt' x Alexanderi 'Album'). This is of the Sanders 'Perfection' strain of Alexanderi. I place this on my list because it is one of the most beautiful large, pure white Cymbidiums I have seen.

Fifteenth. Sussex Moor 'Green Mist' (Sussex x Bodmin Moor). Flowers of this variety are a very light jade green. Perhaps this should be on my second list; however, I am inclined to be partial to a plant that combines remarkable floriferousness with good flower quality.

And so I have listed fifteen Cymbidiums which we have flowered this spring at Stewart's, and which in my mind are among the best. The following list consists of many clones which could well take the place of the varieties listed in the first list.

1. George Lycurgas 'Vivid' (Maya x Apollo 'Exbury'). I especially appreciate high, clear colour. This variety has brilliant greenish yellow flowers on good, long strong stems. The flowers have a brilliant, vivid, live colour that few Cymbidiums have.

2. Nam Khan 'Lita', A.M./A.O.S. I consider this to be the best of the Nam Khans. A

second quality in its favour is that it is a tetraploid and has an excellent parentage, being derived from Rosanna 'Pinkie' x Pauwelsii 'Compte de Hemptinne'.

3. Bullfinch 'Swallowtail' A.M./R.H.S. Here, as in a number of others, I find this variety has the two qualities that seem to automatically place it in the preferred list. Firstly, fine flower quality, and secondly, extreme freedom of bloom. Bullfinch 'Swallowtail' is a beautiful clear canary yellow with concolor yellow lips devoid of any other markings.

4. Edna Cobb 'Chiffon', Bronze Medal Cymbidium Society, H.C.C./A.O.S. (Profita x Balkis). One of my favourite forms of our new Balkis hybrid from Profita 'Mardi Gras' x Balkis 'Silver Orb'. The plant bears a fine spray of lemon chiffon yellow flowers. Incidentally, this variety was the best seedling flowering for the first time, all genera, at the Sixth Annual Western Orchid Congress, Palo Alto, California, in April of this year.

5. Edna Cobb 'Golden Glory' (Profita x Balkis). A very large flower with golden orange flowers.

6. Blue Queen 'Tiffany', Bronze Medal Cymbidium Society, H.C.C./A.O.S. Blue Queen is the only hybrid ever registered from Queen Mary, A.M./R.H.S. 'Tiffany' is a fine golden yellow with the solid crimson lip of the Queen Mary parent. The other parent here is Blue Smoke.

7. Great Day 'Misty Morn', Bronze Medal Cymbidium Society, H.C.C./A.O.S. (Balkis 'Silver Orb' x Swallow 'Green Mist'). I like this variety because the clear light jade green flowers do not fade and have quite remarkable substance even for a polyploid Cymbidium. The flowers on this variety last for months and apparently are not inclined to spot with age.

8. Falcon 'Golden Touch' (Alexanderi 'Westonbirt' x President Wilson). A very large, shapely, intensely rich, golden yellow flower. It bears a magnificent spray when grown on a strong plant.

9. Gladys Hamilton 'Radiance', Bronze Medal Cymbidium Society (Abona 'Dusky Maid' x Pauwelsii 'Compte de Hemptinne'). I place this on my list because it is one of the best of the bronze section I can bring to mind. This plant bears a splendid large spray of reddish bronze flowers. In common with practically all others of these two groups, it is a strong grower and a reliable bloomer.

10. Khyber Pass 'Red Splendor' (Profita 'Mardi Gras' x Carisona 'Abundance'). A

really large intensely dark red that I consider to be quite an improvement in the red section.

11. Balkis 'Nevada' (Alexanderi 'Westonbirt' x Rosanna 'Pinkie'). Readers of the Review will probably not find this fine white to be a variety of which they have heard. In my opinion, it is one of the two or three best Balkis' I have seen.

12. Del Rosa 'The King', F.C.C./A.O.S. (Alexanderi 'Westonbirt' x Peregrine). Considered by many to be one of the great Cymbidiums in cultivation. Chances are I would move this fine white over to list number one after seeing it flower once more.

13. Early Bird 'Pacific', A.M./R.H.S. (Edward Marshall x erythrostylum). In my mind this is the finest of the primary erythrostylum hybrids which I have seen. This variety flowers around October-November each year and has very nice sprays of pure white flowers with yellow lips moderately spotted crimson.

14. York 'Sunray', Bronze Medal Cymbidium Society (Shina Black x Alexanderi). A very beautiful pink apricot. Here, too, as with

many of the others, this plant grows well and has a fine spike habit.

15. Suntan 'Congo' (Candace x Pixie). We must remember that often times we cannot appreciate beauty if we do not have comparison or contrast. I have put Suntan 'Congo' on the list because it is a beautiful, shapely chocolate brown with yellow lip barred blackish maroon. I do not think we shall ever find that suddenly everyone likes the same types of Cymbidiums. One of the secrets of a good flower show display is to have the various colours complement one another, and so here I reiterate, a good chocolate brown is popular with many people. Of course, I have a strong liking for this variety, myself.

Perhaps, as quickly as these notes are in print, I shall wish that I could have included others. Most certainly, this next year will find the list considerably revised. For what it is worth, and the interest it may create, I am pleased to submit it. I look forward to reading notes from other growers.

C/- Fred A. Stewart, Inc. 8606 East Las Tunas Drive, San Gabriel, Calif.

Cymbidium Comparisons

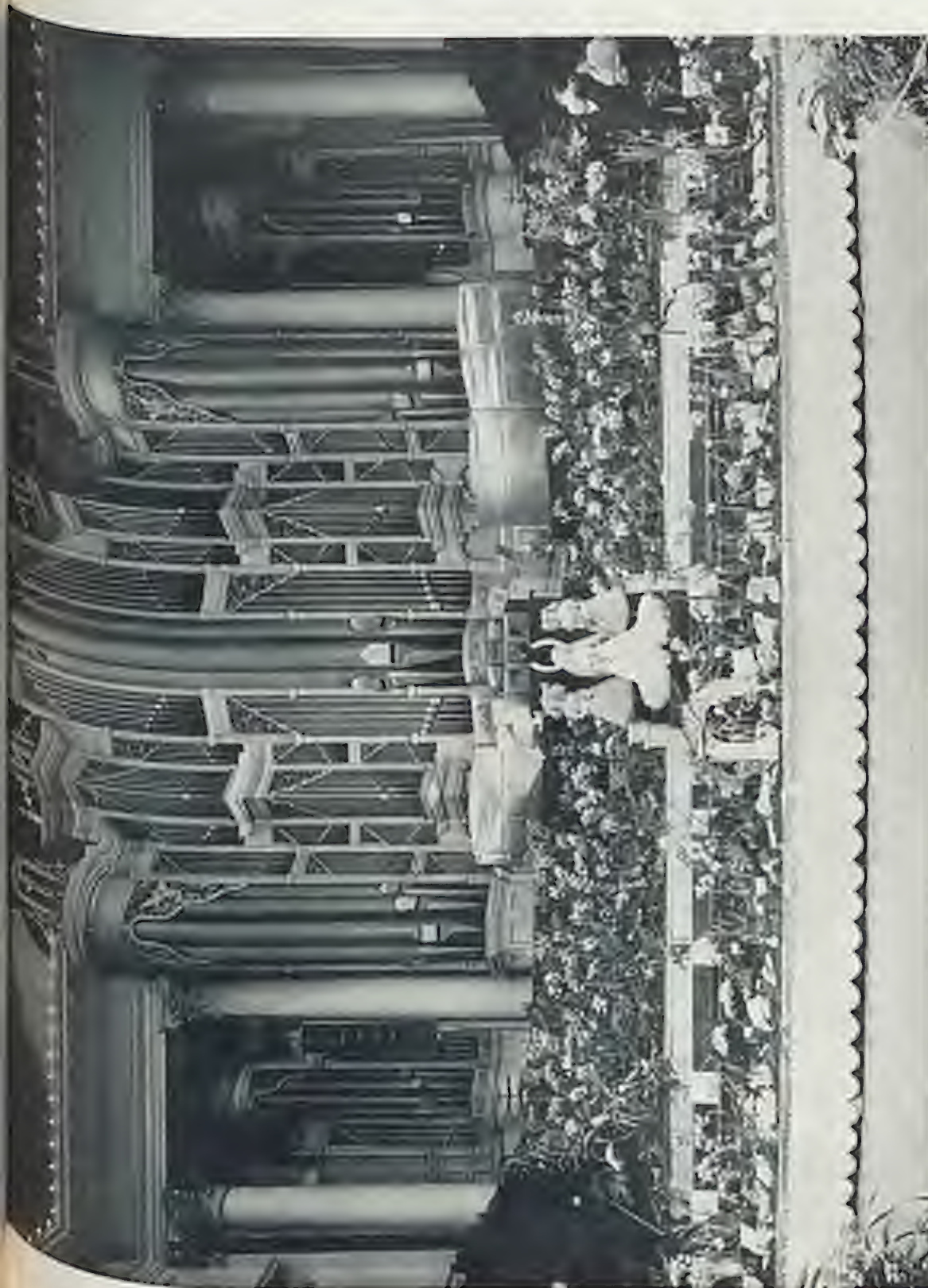
H. JENKINS

• It is not the intention nor desire for this paper to stir up further controversy in the comparison of the merits of the Australian grown Cymbidium versus the types of plants grown in the United States. Without question some distinct differences do exist in standards of judging exhibition plants and in acceptance of certain flower forms, as well as in methods and materials used in the culture. The differences are relatively unimportant when it is realised growers in every country are striving for much the same standard embracing confirmation of shape of bloom, clarity of colour, good spike production per plant and increased flowers per spike.

Certainly the Australian grown Cymbidium proves its worth with the continuing sales of cut-flowers in the United States and Canada. Moreover, Australian varieties or types do win awards in America as exemplified by the well-known Girrahween 'Gloria', awarded an A.M. in Australia as long ago as 1945, and now winning the best Cymbidium in the show at the Sixth Annual Western Orchid Congress held at Palo Alto, California, on April 17th, 1958.

Among others, Swallow 'Hebe', Balkis 'Luath' and Cygnus 'Opalescence' have received awards on the show bench in America.

On the other hand, York 'Lady Slim', which rightfully won an Award of Merit at the New South Wales Orchid Festival in September, 1958, was an importation from the United States, where there is no record of it having received recognition. The fallacy which seems to have become a general opinion, that the Americans prefer an open or star-shaped bloom versus the Australian conception of a more hooded or rounder flower form, is quite without substantiation. The star-shape is an accepted form to a greater degree in America than here, which will be later explained, but with other points of merit being equal the round or full flower will triumph just as handily before American judges as it will by our concepts. The white seedling Jungfrau exhibited by Dos Pueblos at the past April Santa Barbara California Cymbidium Show, which won the "best in the show", was a very round, very full flower and, as an opinion, would meet with exactly the same approval by Australian judges. From the



SYDNEY TOWN HALL STAGE
A unique photo of the stage beneath the organ in Sydney Town Hall, where the O.S. of N.S.W. presented its The Grand Champion *Cymbidium* Doehster "Jeanette", can be seen on the built-up dais from the floor. The large tables gave the stage a new conception for "Here comes the Bride", in the shadow of the majestic organ.



CYMBIDIUM DORCHESTER 'JEANETTE'

F.C.C. O.S. of N.S.W. Ltd. 1958. Owner H. Pearson. The plant carried a fine spike of thirteen flowers. The size of the flower was $4\frac{1}{2}$ inches. The colour was white with the labellum spotted with red. The texture was particularly good and the shape was good. This is only the second F.C.C. granted to a Cymbidium in a ten year period. Reg. No. 386.



PHALAENOPSIS SACHESIS 'BALMORAL'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner, A. Persson. The plant carried two spikes; the one carrying the flower judged had seven flowers, the flower being 4 inches across. The colour was white with yellow dustings in the throat. Reg. No. 385.



CATTLEYA BOWRINGIANA

Popular cluster type cattleya species. Rich magenta colour blooms 3 inches across make for specimen plant culture.

comments of two qualified people, I gained the impression it would not outscore in points the glistening Dorchester 'Jeanette', which gained the coveted First Class Certificate and was "The Best in the Show" in Sydney at the recent orchid festival.

It was my delight and privilege to be in the United States during its Cymbidium blooming period and be back in Australia in adequate time for our own festival and other shows. As a general observation, many more new clones are making their appearance at shows and on growers' benches there than is the case here. Of the four Cymbidiums awarded at the New South Wales Festival, two of them were making their first appearance. However, among the total of twenty-six plants winning in the various sections (seedling classes excepted), only three plants were clones not seen at prior shows. Australia desperately needs new crosses plus new varieties of the old Cymbidium favourites, not only to instil new life into our exhibitions but to grow new cut flower stocks to better conform with the up-grading of types bringing top prices on the overseas florist market.

Nowhere in the world have I seen the sheer breath-taking beauty of the District Exhibits which are always such a feature of the annual New South Wales Orchid Festival. In spite of the arduous labour of active members of these various Societies which produce this awe-inspiring effect, a certain note of disappointment is present because of the monotonous re-appearance of the same variety within a single exhibit and extending into all other settings, artistic as they may be. The Grand Champion and the Reserve Champion certainly were both superbly grown and flowered, clearly earning their recognition. As a conservative estimate, at least thirty of these plants were dotted in exhibits throughout the expanse of the Town Hall. This must have been noticeable to the general public, and amongst Australia's many avid orchid growers (individually, I am certain we lead the world in numbers) it offered only a chance to compare the excellence of growing and flowering techniques. It will be a profitable and more interesting show when we have more seedlings flowering for their first time and a reasonable share of the top importation from other countries on display.

I asked several American growers, both professional and amateur, to choose their five best Cymbidiums as awarded and exhibited to date.

There naturally was a considerable difference of opinion, but the following five clones were repeatedly mentioned:

1. ALEXFRIDA 'MAGNOLIA'
2. BALKIS 'SILVER ORB'
3. DEL ROSA 'THE KING'
4. LUMP O'GOLD 'GLITTER'
5. JUNGFRAU 'SNOW QUEEN'

This list embraces three whites, the Alexfrida is a pink-purple and truly a lovely flower, while Lump O'Gold is an outstanding yellow usually producing more than fifteen flowers per spike. I have taken the liberty of listing the flowers in the order of my personal preference. It is quite easy to believe these will soon be surpassed by the constant pressure of progress in developing new crosses.

To my knowledge only the latter plant is in Australia and its original source was England. These are superb plants and would handily win awards if shown here. This is not being written with disregard to Governmental problems of exchange of currencies and quarantine regulations, but those problems, too, could well undergo a practical examination. We urgently need to export our products, especially to hard currency countries; orchid growers, even the backyard hobbyist, are lending their weight by earning dollars for Australia by sales of flowers abroad. Surely it is a necessity to keep abreast of developing world trends and supply an ever more competitive and demanding market with the finest types of plant stock. It costs just as much to grow and transport a grade three bloom as it does to send a top flower and the return differential can well be less than thirty per cent.

A direct comparison of Balkis 'Silver Orb', which probably is America's best Balkis, and our own Balkis 'Luath' inevitably results in the firm establishment of 'Silver Orb's' superiority. First, it is a considerably larger flower and averages several more flowers per spike, but the real advantage it enjoys is the startlingly heavier texture. It would be most interesting to actually weigh an individual flower of Balkis 'Silver Orb' versus Balkis 'Luath' or any of our other award blooms. I believe this latter factor has a considerable bearing on Balkis 'Silver Orb's' success as a parent, and the substance of its progeny. Its keeping qualities are phenomenal and that must be a very important factor in transshipment of flowers across the Pacific.

Its mating with the floriferous but unimpressive deep pink Carisona 'Glendessary', a diploid,

produced what is probably the most successful large block of *Cymbidium* seedlings raised to date. Special emphasis must be made on this point since I believe all of us will see some revolutionary new flowers in the near future. This one cross, Lillian Stewart, mainly flowered for the first time this past season by numerous American growers in all sections of the country, won fifteen awards, including one First Class Certificate and ten Awards of Merit. The blooms were wonderfully coloured, of excellent conformity up to six inches across, with the repeating item of more than the average number of flowers per spike. Its real worth will be known after May, 1959, when larger seedlings will be throwing their first blooms and repeat spikes come from more mature plants.

This Lillian Stewart story is being duplicated in other crosses by American hybridisers with their growing of thousands of a single cross. The original pollination is made only after much research; a careful examination of both the immediate and background parent plants, including a confirmed chromosome count, and then true scientific methods are applied in bringing the seedling from the flask into a mature flowering plant. With all this basis a mere twenty selected clones from a total of five thousand plants, and in many cases more, is certain to provide the *Cymbidium* world with new varieties of distinct characteristics often exceeding that previously known. Moreover, the uncovering of these exhibition plants is, in reality, a by-product of the purpose of the whole process. The real value lies in the five thousand plants, which are producing top grade flowers in preferred colorations so eagerly sought by thousands of florist shops throughout the United States and Canada. Here lies the source of income, which makes the project possible, and this is the factor giving American leadership in *Cymbidium* orchids.

In contrast, the Australian grower receives less than half the gross sum from his sale of exported flowers, the margin being eaten up by handling and transportation costs to America or Europe. Therefore, he must approach orchid growing with the knowledge he has a limited home market and, if he exports, a reduced income from flower sales instead of a thriving business. His scope of operation is almost limited to that of a hobby grower, which explains at least in part his inability to further invest in expensive property to instal labora-

tories, hire technicians and, in all, enter into scientific wholesale growing.

There's all the romance attached to the Australian Girrahween, but only thirteen seedlings were imported from England to produce the F.C.C. 'Enid' and Girrahween 'Gloria' Award of Merit. What would have been the result had it been possible to plant five thousand seedlings of the *FLAMENCO-LOWI-ANUM* cross? As a note of explanation, Girrahween 'Enid' has never fared as well before American judges as it has in Australia. This again stems back to the florist shop. With its rosy pink hue overlaid onto a cream ground, the individual flower has been judged there as lacking in clarity of colour. This is a principle point with them and all the modern crosses are directed towards monochrome colours with as much elimination of flower streakiness as possible. Examination of the market has clearly shown this is one of the characteristics demanded of successful florist sales, and the Americans have proven themselves unexcelled in exploring a consumer market.

The factor of what is a good florist flower is having a greater bearing on the direction hybridising is taking than is generally realised. It also explains the American tolerance of the open type bloom as long as the balance or confirmation of the flower is in keeping. Class or Grade One blooms, which can bring up to nine shillings per bloom on the wholesale market, must be (1) large, (2) clear in colour whether white, pink, green, yellow or red, (3) free of spotting and (4) heavy in texture with resultant good keeping qualities. The American plant scientist must and does have these thoughts foremost in his mind when he plans a programme of seedling raising. These same factors have their influence in the determined effort to uncover new parents.

To increase the productivity of his houses or acreage, he must also take into account the plant habit of free flowering, season of flowering, spikes per plant and flowers per spike. If all of these conditions result from a happy cross, for the same amount of labour and space, his saleable flower output can readily be doubled over less desirable plants. I seriously doubt if enough of us in Australia are analytical to this point in our growing. Yet it is all the more important for this to be done here since we must meet their market standards and at the same time pay transportation and handling charges over a span of seven thousand five hundred miles.

If we are to keep pace we must either import or develop our own superior stud plants and determinedly raise new modern Cymbidiums which will close this gap of leadership. Only in recent months has there been any evidence of efforts to raise Australian Cymbidium seedlings. This programme needs accelerating in spite of the hazards and handicaps facing it. The market absorption for reasonably priced seedlings to the Australian semi-professional, or even hobbyist, is unlimited if he squarely faces this issue and makes room available by discarding — and, if necessary — burning out-moded varieties.

There is nothing really amiss with the Australian culture of Cymbidiums. Enormous strides have been made in the past few seasons with better understood feeding and watering programmes. In a direct comparison with the lower eastern coastal area of Australia as compared to that of Southern California every advantage lies here. On the all-important subject of rainfall, this area of Australia receives up to fifty inches per year spaced relatively evenly over all the seasons. The comparative areas of California expect to receive no rainfall whatsoever from their growing period of May through September. Their problem is made all the more acute by their municipal water supplies containing such a high percentage of harmful salts as to make the installation of very expensive water treatment equipment almost a necessity for the commercial grower.

Just as important are the air and sunlight factors. Many of the heavier populated areas in California are plagued with increasing atmosphere pollution, which can approach being toxic to plants as well as diminishing the clarity of light so necessary for perfection in Cymbidium growth. On the other hand, Australia's wonderful air circulation ensures no such difficulties as these. Moreover, temperature records indicate we again have an advantage of greater constancy resulting in better plant stability.

If Australia can gain its own superior stud stock, apply itself diligently in the scientific approach to orchid growing and properly use all the incomparable facilities offered us by its natural resources, the position of leadership in development of Cymbidiums, both as a valuable export earning flower crop and as pre-eminence in the direction of show bench plants, is a certainty. If we continue to cling to, and further multiply, our old-fashioned flowers and resist progressive changes, we are just as positive to

awaken to a lost market and diminishing interest by the countless thousands of householders who proudly own a few score plants.

—81 York Street, Sydney, N.S.W.

• **GOSFORD AND DISTRICT ORCHID SOCIETY:**—The Seventh Annual Orchid Exhibition of the Gosford and District Orchid Society was held on the 18th, 19th and 20th September, 1958, in the Masonic Hall, Gosford, and was an outstanding success.

The Judges' comments were that the quality of the blooms was excellent and the decisions very difficult to make.

The main awards were as follows:

Grand Champion Cymbidium—Dorchester 'Jeanette', Mrs. L. Smith.

Reserve Champion Cymbidium—Dorchester 'Jeanette', Mrs. D. Gudsell.

Best Cymbidium for Colour—Carisbrook 'Brick', Mr. W. Proudlock.

Best Cymbidium for Distinctive Colour—Carisbrook 'True Rose', Mrs. D. Gudsell.

Best Single Cymbidium—Dorchester 'Jeanette', Mrs. L. Smith.

Best Two Cymbidiums—Inamorata 'Lycaste' and Dorchester 'Jeanette', Mr. R. H. Caton.

Best Three Cymbidiums—Dorchester 'Jeanette', Balkis 'Luath' and Princesse Astrid 'Dorothy', Mrs. L. Smith.

The Office Bearers for the ensuing year are: President—Mr. R. H. Caton.

Vice-Presidents—R. G. Kirkness and C. R. Bateman.

Treasurer—D. Bronsdon.

Librarian—H. S. Ellis.

Secretary—W. J. Gudsell, 93 Broken Bay Road, Ettalong Beach.

Editor and Publicity Officer—H. Partridge-Wall.

Committee—Messrs. Blain, Hills, Watkins, Neale and Partridge.

• **FRONT COVER:** At the O.S. of N.S.W. Festival this orchid gained its award for distinction. Beautifully presented by Mr. Frank Slattery in his Trade Exhibit, the raceme was one of those exhibited on five plants of the clone and it is probable that no other green orchid has commanded so much admiration and attention. The official description of the award was: A.D. O.S. of N.S.W. Ltd., 1958, Owner, F. Slattery. Nine pod green, B.C.C. flowers were displayed on an arching spike. The 4" flowers had excellent texture with this plant carrying two spikes. Reg. No. 388.

The Autumn Season in Victoria

J. N. RENTOUL

• Writing a little in anticipation, we have had a good growing season in Victoria after a somewhat patchy and slow beginning. Very warm days, up to the eighties and nineties, produced vigorous and swift growth on Cattleyas and Cymbidiums; and where cycles suited the Dendrobiums, left-over growths from last year have added considerably to their height. Where glass houses suited the "Slippers" they have made good progress, and growers who have had poor growth without good glossy finish on the leaves should convert either composts or glass houses to supply better conditions if they want any satisfaction from these orchids.

Change-over

March-April is the change-over period in Victoria, the autumn appearing outdoors in shorter days and less sunlight, and in glass houses by lower temperatures and slowing-down of growth processes. This slowing-down should be more in the nature of maturing conditions for all orchids except for those Cattleya species and hybrids which make autumn and winter growth and flower in the spring.

The feature of the change-over period is the modification of watering. Modification falls into two sections — *the increase of surface watering in heated glass houses and the decrease of surface watering in unheated glass houses*. Each is of outstanding importance in its own sphere.

While most glass houses would be better in autumn and winter with some form of heating, many growers are very successful without heat. Usually they are successful by being selective in their plants and keeping them to the bare number needed to give the glass house its own "atmosphere". That atmosphere is maintained by air circulation and watering.

Fresh Air

Taking air circulation first, it is this factor more than anything else which matures plants and hardens them off to flowering stage. Sometimes flowering may be months ahead, but the clean air changes each day keep the buds and sheaths hard and fresh for a break-out in the first push of spring weather.

Air is best admitted in unheated glass houses by adjustable vents in the roof rather than by air admitted lower down near the ground

where it is cold. But however it is passed into the glass house, *never forget to close the ventilators* in mid-afternoon. If forgotten, it may be just the night for a frost and can cause loss of buds and flowers. Early opening, early closing is safety first.

In heated glass houses the same problem occurs in reverse—the heat must be allowed to circulate freely before escaping and must be retained as much as possible in cold periods. Again, overhead ventilation is best, *provided that low ventilators and apertures are closed*. If they are open there is too rapid circulation and heat loss. Inlet is by down-draught, and air exhaustion slowly accomplished through the same ventilator.

Many growers are in error when they try to hasten flowering, particularly in Cymbidiums, by closing the ventilators and boosting the temperature a bit. Cymbidiums will lose buds by this system quicker than any other way. Fresh air and preferably a chill or two in the autumn is far more to their liking. Maturity is encouraged by cold, fresh, daytime air and some circulation at night. Cattleyas and Cypripediums find these factors of less importance, air playing a greater part in the lasting quality of the flowers than in their production.

Watering is always an individual matter, adjusted to suit the glass house and its form of heating where heating is used. In unheated glass houses water should be applied early to mid-morning, when some indication of the type of day can be gained. Naturally, on a rainy cold day there is neither need nor common sense in watering either overhead or into pots in unheated houses.

Air circulation can balance watering—perhaps we should say *must balance*. If there is no balance two conditions occur—the house either dehydrates quickly or remains too humid. That humidity is not related to temperatures high enough in unheated houses, the result being marked foliage and root loss, the two usually being synchronous. It is in the balance that a grower is successful, and mastery must be attained, even if it is the annual repetition of a fluke or haphazard chance that brought success.

Heating is Tricky

In some ways heated glass houses pose as many problems as unheated. They tend to dry

out in patches and pot-sizes rather than as a whole glass house. Air is necessary to balance watering and ventilate heat-staleness, so that periodically the plants are dehydrated in a day without the grower being aware of it.

It is essential for water to be applied every day in some portion of the glass house, and preferably over the staging and floor, even if it is too cold and damp outside to water directly on the plants. Atmosphere is "created" in heated houses, where it is usually normal humidity in an unheated house, even if the temperature does not balance it.

Plant Feeding

Regardless of the type of orchid grown, any nutrient project is best carried on to plant maturity. That stage may vary from plant to plant, and as they mature they should be aggregated in one section and their treatment modified to accord with their condition. The promotion of flowering varies from genus to genus, but they have in common their need of plant foods, adequate light and sufficient water to maintain them.

In that order, their nutrient needs will be less and slightly different for flowering as against growing. Some attempt should be made to lessen the nitrogen in whatever is used and increase phosphates. As orchids need only minute quantities at any time they should receive modified flowering nutrients of the same order.

Light is usually modified by painting and shading in the summer months, and at this time of the year should be admitted more freely from a weakening sunlight. It is a simple process of increasing a necessary condition to stimulate the finishing-off processes that must precede flowering. If the paint on the roof shows signs of lingering too long, hose the roof on the outside until the paint is wet and then give it a rub down with a hair broom, coarse or fine. It is always best to wait for the female element to be out if the house brooms are used. Wash carefully, dry and return before she comes home.

Water for maturing plants is always better applied as the plant needs it. The tell-tale is usually the old part of the plant, which should plump up in the late summer as the plant feeds back into it whatever is not needed by the newer leading part. So long as the old part of the plant is plump water is unnecessary except as a foliage spray. Once the older part shows ribbiness, thoroughly saturate the compost and then wait for it to dry out or fill out and

shrivel again before the next soaking.

Those are the three conditions which suit most orchids, and within reason *must be balanced by all growers into an individual combination to suit their requirements*. Usually a matter of trial and error, there is no reason why there should be failures. Appreciation of them as individual items is more than necessary before an attempt is made to combine them, and also to realise that all glass houses are so very different. The March-April-May season is the time of the year when the lesson is driven home by success or failure. Make yours success.

• KU-RING-GAI ORCHID SOCIETY:—

A magnificent display of Cymbidium and Miscellaneous Orchids greeted members and visitors when they attended the Annual General Meeting of the Ku-ring-gai Orchid Society held at the Killara Memorial Hall on Wednesday, 15th October, 1958.

The exhibits were in keeping with the high standard set at the last Annual Show and the judges were set a most difficult task in deciding the winners of the respective sections.

Voting on a notice of motion, the meeting unanimously approved of a change in the Society's name from "The Hornsby-Ku-ring-gai Orchid Society" to "The Ku-ring-gai Orchid Society".

The President, Mr. D. W. Hardie, in his address on the year's activities, dealt with the influx of new members and the friendly atmosphere of the Society's meetings and expressed the Society's thanks to the Ku-ring-gai Council for its co-operation during the year.

Election of officers for the coming year resulted as follows:

Patron—Mayor of Ku-ring-gai, Ald. A. Campbell.

President—D. W. Hardie.

Vice-Presidents—J. Taylor and R. Quigley.

Secretary—Les Campbell.

Treasurer—H. Ludowici.

Committee—W. Walker, E. Webeck, M. Jenkinson, F. Holberton, W. Robins and R. Dalgairns.

The descriptions of all award flowers that are printed in this Review are those which are officially compiled by the Registrar, Mr. W. Smoothey, of the O.S. of N.S.W. As culture plays an important part towards the colour of any orchid the official record should aid as a guide to better flowering techniques.

Orchid Culture in Western Australia

A. C. DAWSON

Perth being approximately the same latitude as Sydney makes it appear that the comparison between those two cities would be most appropriate. Australia, like most other continents, is arid on its western side. The drab and dirty appearance of practically all old stone walls and buildings in Sydney is not all due to dust and smut, as a close inspection will reveal that they are covered with various fungi, whereas in Perth the old stone masses are still a clean glistening sun-baked white. This serves as a graphic demonstration of the great difference in atmospheric conditions that prevails between the two cities. Another feature is that whereas Sydney's summer "westerlies" must be somewhat tempered by the heavily wooded Blue Mountains, Perth gets its "easterlies" served hot direct from the Nullabor.

Rainfall statistics are not brought into the matter—while Sydney generally gets its summer rainfall Perth gets practically nil.

On the other hand Perth does not have to cover its glass houses with bird wire to keep out the marble-sized hailstones.

As our summer seems to endure for five or six months, perhaps something on general culture would be nearer the mark.

The number of orchid enthusiasts in Western Australia is approximately in the same proportion to total population as in New South Wales, and although we in the West are fortunate and most appreciative of receiving much good advice and wise council from that fine body of more experienced growers in the East, we still have to strive to overcome the handicap of our hot arid conditions. But every year a marked improvement in culture is shown, more so with Cymbidiums, and the day may not be far distant when in an all-Australian championship, W.A. may fill one of the minor places—maybe it's round the corner like Jim Rentoul's blue one.

CATTLEYAS. The same conditions apply to both cities excepting that in W.A. they all have to be grown under glass for humidity. I have still to see one successfully cultivated and flowered in a bush house. Very little artificial heat is used, but temperatures of 38-40 degrees F. are not uncommon in the winter months. *Osmunda* (ex Japan) is the favourite potting media, but sphagnum moss mixed with the

fibre is not advised unless artificial heat is available.

CYPRIPEDIUMS are our most successful orchids, usually cultivated in fifty per cent tan bark and fifty per cent bush leaf mould and oak leaves with a sprinkling of bone meal on top of the compost, to be leached in, situated in a shaded glass house, but with good light to avoid rank growth.

DENDROBIUMS are best grown in the glass house in fibre. Grown in a bush house they just exist and gradually go down. To tie them to a tree outdoors is to condemn them to a slow death.

The Queensland varieties are by far the most successful. The exotics are not happy and just slowly deteriorate despite the most painstaking attention. At our 1955 Spring Show Horrie Mercer (our leading Dendrobe. grower) staged a six-inch pot of *D. superbiens* carrying eleven spikes with over two hundred blooms—the plant was over four feet high and three feet wide.

At present he is doing remarkably well with some of the later crosses.

ODONTOGLOSSUMS have not been attempted, to my knowledge. *O. grande* grown with the Cymbidiums gives satisfactory results in either fibre or a good Cymbid. mixture—without the poultry manure.

LYCASTES give quite satisfactory results, but when we read in the A.O.R. of plants carrying fifteen or sixteen blooms to a pot it makes our best effort of six or seven suffer in comparison, and it appears that we shall have to do better. They are usually grown in fibre.

VANDAS. To date only the species and old-time hybrids are seen. They are all grown under glass. Perhaps in the near future some of the later crosses, purchased a few years ago, will make their appearance. They are not very popular in W.A. Practically all the vandaceous genera are conspicuous by their absence.

MILTONIAS. Only a few have made their appearance. With a little care shown in the hot weather there is no reason why these beautiful orchids should not be successfully grown. No doubt their numbers will increase.

CYMBIDIUMS. Perhaps the most popular, but in the past have offered the greatest challenge to flower them successfully.

After many years of endeavour and co-operation between the older growers, it was proved that when the heat became excessive in November the plants stopped growing. The young flower spikes just starting into growth at that period stopped also. The plants remained dormant until the end of March then began to move again, but during the dormant period the flower spikes had perished.

The problem was to keep the plants moving and this, in a large measure, has been overcome—see page 200, A.O.R. December, 1958.

Of course, like our kin in the Eastern States, we will always have those mulish hard-to-flower types—but that seems to be a universal problem.

It is only on rare occasions that a flower spike is produced on the current growth, ninety-nine per cent of our flower spikes occur on the previous year's bulb.

Acclimatisation must be considered as a major factor in all orchid culture, more so with Cymbidiums. I have known plants that were purchased in Sydney in 1946 to grow on into robust plants in Perth without sign of a flower spike for six or seven years, but since then each division has flowered regularly without any special attention. One plant in particular (C. Vesta x Roseum) brought home in 1947 was divided on numerous occasions and commenced flowering in 1954. One division grown as a specimen plant in 1958, in a twelve-inch pot, produced eight spikes carrying ninety-two blooms.

Perth's water supply is drawn mostly from the iron-stone hills of the Darling Range and gives good results.

• BLUE MOUNTAINS ORCHID SCTY.

—Third annual exhibition by the Blue Mountains and District Orchid Society was the best on record. It attracted a wealth of glorious blooms, all produced by members of the Society.

Held in Warrimoo Citizens' Hall, October 10th and 11th, the exhibition was officially opened by the Consul for the Netherlands, Mr. Keinkamp, who spoke highly of the quality of the blooms on show and expressed pleasure in being invited to perform the ceremony.

Many people visited the exhibition. Members of other Societies said it was one of the best displays they had seen.

Generally, the quality and colours of the blooms were much better than at last show.

Biggest entries were in the novice section.

A beautiful display was arranged on the stage by workers of the Society.

Champion Cymbidium was exhibited by Mrs. C. H. Deane. The reserve award went to Mr. C. R. Deane's exhibit. Mr. R. H. Caton showed the best Cymbidium for colour.

Official judges were Messrs. J. Thompson, B. Oxley and R. Deane.

Mrs. C. H. Deane had the best Cymbidium exhibited by a member of the Society.

Other awards:

Open Section:

Group of three Cymbidiums—Mrs. C. H. Deane, 1st; Mrs. B. E. Deane, 2nd.

Group of three (for colour)—C. R. Deane, 1st; C. H. Deane, 2nd.

Best Cypripedium—C. H. Deane, 1st and 2nd.

Best Dendrobium—C. H. Deane, 1st and 2nd.

Best Australian Native Orchid—B. M. Deane, 1st and 2nd.

Best orchid not otherwise specified—C. H. Deane.

Best Cymbidium for export blooms—Mrs. R. H. Caton.

B.M. Society Members:

Best single Cymbidium—C. R. Deane, 1st; R. H. Caton, 2nd.

Two Cymbidiums, distinct varieties—A. H. Caton, 1st; C. R. Deane, 2nd.

Best Specimen Cymbidium—C. R. Deane, 1st; E. H. MacDonald, 2nd.

Best Cymbidium, decorative type—C. R. Deane, 1st; Mrs. C. H. Deane, 2nd.

Best single Cymbidium, distinctive colour—R. H. Caton, 1st and 2nd.

Best orchid not otherwise specified—R. H. Caton.

Best decorative vase or bowl of orchids—Mrs. U. Brown, 1st; E. H. MacDonald, 2nd.

Best shoulder spray—Mrs. W. Lang, 1st; Mrs. C. H. Deane, 2nd.

Novice Members:

Best single Cymbidium—E. H. MacDonald, 1st; Mrs. C. H. Deane, 2nd.

Two Cymbidiums, distinct varieties—Mrs. C. H. Deane, 1st and 2nd.

Best single Cymbidium for colour—Mrs. D. T. McPherson, 1st; E. G. McPherson, 2nd.

Best orchid other than Cymbidium—T. H. James, 1st; Mrs. W. Long, 2nd.

Members of Springwood Red Cross branch handled the catering arrangements.

• Orchid Secretaries are reminded to solicit an article for the A.O.R. when their Show results are sent in to be published.

N.S.W. Orchid Culture in Autumn

H. J. LAWLER

• The "Indian Summer" experienced in Sydney for the past few years usually takes the place of autumn weather. As this is the period when the new growths of most of our orchids should be ripened or hardened, the orchid enthusiast is sometimes caught unawares and is lulled into a false sense of security by commencing a day with very warm conditions and hence heavy watering, yet, by evening, the temperature may fall to 55 degrees F., a drop of 20-30 degrees in ten hours. It is this difference in temperature that causes bud drop and damping off of new growths. Also, the high day-time temperatures seem to delay rather than speed up the spikes now well advanced on our Cymbidiums.

With glass house culture and automatic heating these extremes of temperature cause no worry. It does pay, however, to be patient and provide a box of chocolates now and then to have someone watch for falling temperatures in the mid afternoon and lower or close all ventilators to conserve the sun-heat until you arrive home from business and light the boiler or heater.

Unless your burner is one that completely burns all the kerosene fumes then you are wasting your time trying to flower Dendrobiums of the hardwood type, Cattleyas and Phalaenopsis. The sulphur gas that is left unburnt will deposit on the unopened buds and water or moisture caused by condensation quickly spells finis to the bud. A kerosene heater that is situated *outside* the house does not cause as much trouble if the water in your interior pipes can be heated from this external unit. This scheme is not perfect as the wind usually drives some of the unburnt fumes into your glass house.

There is no record of sepal wilt, bud drop, etc., from older growers who use the old-fashioned coke burner. Modern appliances are time saving, especially, too, as the coke ashes are sometimes hard to dispose of and the boiler always needs cleaning—but—make sure the new device burns *all* the kerosene, if kerosene is the fuel.

Now is the time to make sure that your heating appliances will work when you need them. It can get cold very quickly once March is behind us. Do it now!

CYMBIDIUMS

Most of us have estimated just how many plants will be flowering this season. To save looking over the plants again and again it is best to put a stake in the pot as you see the spike and this in turn will also prevent the snapping of an unseen spike which sometimes occurs with annoying results. Make sure that the new spike faces north and as the stake is placed into the pot give the plant another topping of fresh fowl manure and cover with fresh compost or tan bark. Plenty of water is still required by these flowering plants. By this time you should have seen the results of the manure plus plenty of water during this year. Your new growths should all be carrying a flower spike; this spike must *not* be permitted to get a set back by lack of water. A sure sign of this is the brown papery sheath covering which extends along the whole of the raceme. The new manure will remind you to keep watering the plant.

As each plant is placed into its flowering position or flowering house, make sure that plenty of air still surrounds the whole of the *interior* of the new position. Most "spotting" of the blooms will be prevented if a weekly spray is used all around the plant, under the benches, over the spike, in fact, everywhere, consisting of two teaspoons of Shirlan A.G. to one gallon of water every seven days. Get rid of all ants and slugs away from these flowering plants and *don't* use a liquid spray for red spider, thrips, etc. Use a dust such as Folidust; this will not harm the new buds. Don't be in a hurry to tie up the arching racemes; let them naturally grow and arch with the weight of their own buds.

Remember that painted glass is used to keep out the burning rays of the sun. It is not used to keep out the *light*. A piece of cheese cloth or very open hessian is dark enough, under painted or frosted glass, to flower green orchids to perfection. Heavy shade will cause the bloom to be very small in size and therefore not suitable for export. Red or pink Cymbidiums need clear glass; whites, lightly frosted; yellows, nearly clear glass; nearly all Cymbidiums need shaded conditions once the flower is "out" so as to prevent the sun from taking the colour from the flower.

At the end of May before the "busy" season commences, buy some compost, pots, etc., so as to be able to commence repotting in June.

CATTLEYAS

Unless these plants have not yet flowered do not continue feeding. The majority of the Cattleya tribe usually cease visible activity in autumn and watering is gradually eased off during their period of dormancy. It is unwise to force a second new growth in the one year. The second growth is never as successful with its flower as the first. Plants that have not flowered may be treated as previously advised.

As the bloom is cut from the plant is the time to back cut the plant if a second plant is required. I use a hacksaw blade to nearly sever the rhizome leaving three bulbs in front of the cut. Wipe the blade in an antiseptic before using on another plant. Zephiran is a popular antiseptic. Hot steamy conditions encountered during March must be met by spraying every two weeks with a fungicide. One of the new "all in one" sprays can do an all-purpose job for you. Lanes have "All in One" at 4/6 per one pound packet. Use as directed either with a dust gun or a liquid spray by adding water.

Watch for the sudden cold snap at the end of March. Start your heaters burning to keep the temperature at 60 degrees. With this heat, watering does not create much of a problem. Let the plants dry and then water. Overhead misting each day can be forgotten for the next few months.

CYPRIPEDIUMS

The flowering season has now commenced and with it the joy of expectation is either dampened or fulfilled. Tie the flower stalk to a stake before it has completed its growth and then tie the bloom itself to the stake for presenting it to your friends. Do not let the flower "hang" its head if you want to impress the judges.

Cypripediums must not want for water during their growth, especially when the flower spike is growing. More double buds and short stalks are caused by this lack of courage than anything else. I say "courage" because if you used a topping of manure on the flowering plants then you must keep the plants damp.

Buds dying in the axil of the leaves can be minimised by watering on windy days and giving the plants plenty of air to aid the drying out of the leaves before nightfall. If 60 degrees of heat is available there should be no buds dying or rotting. The trouble is usually a clonal one as invariably the same plant is susceptible to this annoying feature.

If your plants were potted in one-third fibre, one-third peat moss and one-third tan bark at the beginning of this season, there is no need to repot for this coming year. Back cut the plant if it has three growths in front of your cut. Use your fingers most carefully and gently force the front three sections away in one piece. Dab a drop or two of Stockholm Tar on the cut to prevent possible rot at the break. Leave the plant be until next year, when a much better bloom should result from the stronger plant.

Any repotting to be done can be commenced as soon as the flower is cut from the plant if you have 60 degrees of temperature. Bush house grown Cypripediums should not be repotted now. Leave the plants until spring. Short stalks on plants grown in bush house or cool conditions are the result of not having enough warmth.

With the possible exception of *Cyp. insigne*, Cypripediums do require a heated glass house in Sydney to give of their show bench qualities.

MILTONIAS

With the flowering of these orchids now completed, the new growths are well advanced and should have been repotted when the new roots made their appearance. If you missed repotting at this time *don't* do it now. The damage to the plants is so harmful that they are set back for years even if no losses occur.

Autumn and winter is the growing period; keep the temperature to sixty degrees. Water enough to keep the compost damp at all times. A good guide is to place some moss on the *top* of the compost and keep it growing. Green moss means no water, grey or white moss means more water. Don't use moss that is grown in N.S.W. The best moss is the Tasmanian moss, which is procurable from Melbourne. The N.S.W. moss needs so much water to keep it alive that the plant may as well be grown submerged in a fish pond.

Spray regularly for red spider. The dry conditions which permit the breeding of this pest should not be encountered in a Miltonia house, but if you get red spider then your moral is that your conditions are too dry.

ODONTOGLOSSUMS

Autumn and winter suits the Odont. family in our Sydney area. The leaves begin to stand up and, like the Miltonias, it is their growing period.

Do as I have suggested with the moss for Miltonias. Odonts. grow much better if the same 60 degrees of temperature is kept up. This permits their watering to be easy and an

extra cold snap will not cause root loss in their damp fibre.

Go over the plants and cut away all old, soft back bulbs. If you did not propagate the plant then the risk of bulb rot is present from these old bulbs. Dust the cut with sulphur or dab on a drop of Stockholm Tar.

Slugs love the flower spike. Metaldehyde used in a dust gun is the best way to eradicate these pests. When watering is done the powder finally finishes on the floor beneath the benches where it still carries on the good work. Pure metaldehyde is obtainable at wholesale chemists for about 14/- per pound.

VANDAS

If you have any Vandas growing in the bush house for summer growth then bring them into your glass house for the cool season. As soon as you feel the cool evenings starting to bring in autumn it is time for more warmth for your Vandas. Watering is continued in large quantities so long as the roots have green tips. Feed and spray as long as you can by using 60 degrees of heat to get the utmost growth before winter sets in. Alternate each week with Aquasol and fish emulsion for balanced feeding.

If a Vanda root has grown along the bench or around another pot, don't tear the root, cut it with your secateurs if you *must* take the plant to a show.

PHALAENOPSES

It is not much use trying to grow these orchids if you have no heated glass house in this area. Set your thermostat to 65 degrees if possible and leave it there as soon as a cool snap ushers in the autumn. At this temperature flower spikes will commence to grow. The flowering of Phalaenopses is easily controlled by the raising or lowering of the temperature. These orchids never seem to cease growing and need feeding every week. The lack of heat not only causes the plant not to flower, but gradually kills the plant altogether. Spotting of flowers is caused by condensation and water being present when the temperature is too low. Keep high temperatures for Phalaenopses and spray the plants with Shirlan A.G. to prevent bud drop.

Try to present your plant for judging when the spike is opening with the buds unopened in front of the open blooms. Judges will not judge any orchid in Sydney that has lost its buds. Most Phalaenopses lose a flower or two before the last one is open, hence the idea of showing the plant *before* it has all its flowers open.

• **THE ORCHID CLUB OF SOUTH AUSTRALIA SPRING SHOW:**—The Annual Spring Show of the above club was held on the 22nd, 23rd and 24th September in the Liberal Club, North Terrace, and from the comments of both members and visiting public, the general presentation exceeded that of previous years.

We were fortunate in having a visit from three well-known Victorian growers, Messrs. G. McCraith, J. Allan and R. Hodgins, who graciously agreed to judge the Show.

Cypripediums were fewer in number, but the quality and quantity of both the Cymbidiums and Cattleyas had never been bettered.

The Champion Cymbidium of the Show was awarded to Mr. A. McAllan's Girrahween 'Gloria', which seems to do very well in Adelaide, a flowering size plant usually rewarding the grower annually with a nice spike. The same grower had the best green in Cymbidium 'Esmerelda' with its well-known arching spike. A large plant of Cymbidium Eagle 'Arctic' gained the blue ticket for the best white for Miss D. Thomas, while the pink section was won by Cymbidium Louis Sander 'Kirribilli', with three spikes, a large plant from Mr. N. Christoph's collection.

Mr. F. De Rose exhibited the best yellow, a nice spike of Cymbidium Swallow 'Daffodil', while the red section was won by Cymbidium Doris 'Aurea' owned by Mr. C. H. Scott.

Cypripediums were fewer in number, as was to be expected with the Show a week later than usual, but the best bloom shown by Mr. F. De Rose was right up to standard, this being Cypripedium Matchless 'Marilee', the white dorsal heavily spotted and pouch and petals a reddish brown. The same grower also provided the best Dendrobium Grace, bearing quite a number of shapely blooms.

Cattleyas were more numerous than usual, the winner of the section being Laelia Cattleya Jevington shown by Mr. N. Christoph — a large plant with four blooms of fair shape, an orchid mauve colour with a solid purple lip. The miscellaneous section was not well represented. The winner being a pale pink Phalaenopsis Mistinguette exhibited by Mr. A. D. McAllan.

A cut flower collection of Cymbidiums and Cattleyas brought over from Melbourne by Mr. G. Leverett completed what was generally conceded to be our most successful Show for years, from an exhibition and financial viewpoint.—N. Christoph.

Judges and Judging

W. W. SMOOTHEY

Continued from Vol. 23, No. 4

JUDGING

In the previous article on this topic the method of appointment and the functions of the Judges of the Orchid Society of New South Wales Limited were detailed so that you would have a better understanding of the men who make the decisions concerning the granting of prizes at Shows and the granting of Awards for particular plants. The purpose of this present Part is to let you know the standards upon which flowers are judged for Awards and prizes (where applicable) and the By-laws of the Society that are relevant to the granting of Awards and prizes. In other words, to tell you what is really involved in "Judging".

METHODS OF JUDGING

It might make the position clearer if I tell you that in general there are two methods of judging for an Award.

The first method is what is known as a "points score" method by which points are allotted for shape, colour, texture, size, habit of spike and floescence in accordance with specified maximum points for each of these characteristics. The points allotted by each Judge are totalled and the totals of all of the Judges in the Panel are averaged. If the average result is eighty-five points or higher the flower is eligible for a First Class Certificate (F.C.C.). If the average result is eighty points or higher the flower is eligible for an Award of Merit (A.M.). If the average result is seventy-five points or higher the flower is eligible for a Highly Commended Certificate (H.C.C.).

The second method of judging is what might be called "the appreciation" method. By this method each Judge critically examines the flower and the plant submitted and makes an assessment of what award, if any, he considers the flower merits. He is entitled, if he so desires, to check his "appreciation" with the points score method, but he simply marks his judging card in the appropriate square indicating either F.C.C., A.M., H.C.C., A.D., or N.A. (No Award). Reference is made to Awards of A.D. (Award of Distinction) and C.C. (Cultural Certificate) a little later as it is, of course, possible for a plant submitted to obtain one of these Awards in addition to those I have

already mentioned. When each Judge has marked his card, signed and dated it, the Registrar of Awards examines the cards and totals the allotments to decide whether a simple majority of the Judges of the Panel have voted in favour of an F.C.C. If they have not, then the votes in favour of F.C.C. are credited to the next highest Award, the A.M., and consideration is given as to whether the result is a majority in favour of an Award of A.M. If there is no such majority the votes in favour of F.C.C. and A.M. are totalled with those in favour of an Award of H.C.C. to determine whether or not a majority is in favour of that Award. If there is no such majority consideration is given to the votes directly marked for A.D. or C.C. and if there is no majority for such Awards it is obvious that the majority of the Judges are not prepared to recommend an Award. When a Judge marks his card "N.A." he is asked to state the reasons so that the Registrar can see that the Judge has properly applied his mind to the judging. One of the By-laws provides that a Judge may be required to give an explanation to the Committee of his assessment should it vary ten per cent. or more from that of the mean average assessment of his fellow Judges. His assessment is discarded if, in the opinion of a majority of the Committee, that Judge's explanation is unsatisfactory. It is also appropriate at this stage to point out that discussion by Judges and Associate Judges is permitted on all plants submitted for Awards prior to the distribution of judging cards. After the distribution of the cards each Judge and Associate Judge must mark his card without reference to other Judges and his card is discarded if he contravenes this rule.

Considerable differences of opinion exist as to the merits of each of the two methods of judging and there is no doubt that both methods have advantages. In theory the points score method reduces the question to a simple mathematical calculation and it cannot be denied that it is a most useful method of training Judges. But in New South Wales the "appreciation" method is being tried and appears to be generally well received. It may be appropriate at this stage to point out that it was introduced in the light of experience in other States and countries and in particular in

our own State, where an examination of the maximum permissible points on the standards set out below will show you that it would be possible, for instance, for a *Cymbidium* having no pretention of shape but being pure glistening white of good texture, four and a half inches and over in size and with thirteen or more flowers on the spike to get a Highly Commended Certificate. That is, it would only require five out of a maximum of thirty points for shape to enable it to qualify for that Award although it could be "spidery" but still symmetrical in form, circular in outline, slightly concave and well balanced with the petals and sepals rounded at the end and evenly spaced. It could be free from hooding, furling, reflexing and any other distortion.

To conclude this brief reference to the methods of Judging I must clarify a matter in respect of which some people are in doubt. It is that the adoption of the appreciation method (whether for a trial or not) does not mean the abandonment of the standards which have been approved, generally in collaboration with the Victorian Orchid Club and after having regard to the acceptable standards of other countries. Those standards still apply, but the Judges have greater latitude in applying them in the light of current trends and improvements.

JUDGING STANDARDS

The standards that apply in judging for an Award other than A.D. or C.C. are set out, so far as the genera *Cymbidium*, *Cattleya*, *Cypripedium* and *Odontoglossum* are concerned, in the Handbook issued by the Society. Standards for the genera *Dendrobium*, *Phalaenopsis*, *Miltonia* and *Vanda* were adopted by the Committee of Management at its meeting in May 1958. To codify these they are listed as follows:

GENUS—CYMBIDIUM

In judging for an award other than A.D. or C.C., a flower with the best general appearance on the stem shall be selected for measurement of size and determination of shape, colour and texture, provided the other flowers are of a relatively even and comparable standard.

The stem on which this flower occurs shall be judged for habit and florescence.

SHAPE of flower to be symmetrical in form, circular in outline, slightly concave and

well balanced. Petals and sepals to be broad, rounded at the ends, close and evenly spaced. Hooding, furling, reflexing and any other distortions are undesirable. The labellum to be wide and fully displayed. The distal end should not turn under. Maximum 30 points.

COLOUR shall include white or any other colour or combination of colours. It should be clear, glistening and fresh, not smudgy or blurred. All markings and shadings shall be well defined and evenly distributed. The colour of the labellum shall be considered in assessing the general effect. Maximum 30 points.

TEXTURE. The flower shall be of good substance, refined quality, firm, fresh, lustrous and without any blemish. Maximum 15 points.

SIZE. Shall be measured across the visible limits of the petals and points allotted in accordance with the scale. Maximum 10 points.

HABIT OF SPIKE. The stem to be sufficiently strong to support the inflorescence unaided. It should be long and preferably arched or may be straight but not twisted. The flowers should be evenly distributed and well displayed without overlapping or bunching. Removal of a flower or flowers shall disqualify.

Maximum 8 points.

FLORESCENCE. All or nearly all flowers on the stem should be open, and points will be allotted for open flowers according to scale, provided that all flowers shall be fully open on spikes carrying thirteen or less.

Maximum 7 points.

Scale for Size		Scale for Florescence	
	Pts.		Pts.
4½" and over	10	13 or more flowers	7
4¼" and over	9	12 or more flowers	6
4" and over	8	11 or more flowers	5
3¾" and over	7	10 or more flowers	4
3½" and over	6	9 or more flowers	3
3¼" and over	4	8 or more flowers	2
3" and over	2	6 and 7 flowers	1
Under 3"	1	Under 6	0

GENUS—CATTLEYA

SHAPE of flower to be symmetrical in form and circular in outline. All flower segments—sepals, petals and labellum—to be broad, slightly concave, rounded and evenly balanced. The dorsal to be upright and may be slightly hooded. Widely spaced, narrow or reflexed

petals and sepals or petals which fall forward are defects. The labellum to be wide, fully displayed and slightly concave or straight from the base. Frilled or serrated edge an advantage, but the apex should not turn under.

Maximum 35 points.

COLOUR shall include white or any other colour or combination of colours. It shall be clear, glistening and fresh, not smudgy or blurred; pleasing and attractive, whether soft, pastel or brilliant. All markings and shadings shall be well defined and evenly distributed. The colour of the labellum shall be considered in assessing the general effect.

Maximum 25 points.

TEXTURE. The flower shall be of good substance, refined quality, firm, fresh, lustrous and without any blemish.

Maximum 15 points.

SIZE. Shall be measured across the visible limits of the petals and points allotted in accordance with the scale. Maximum 15 points.

CARRIAGE. Flower or flowers to be effectively displayed on a firm stem. Crossing or bunching is a defect. Removal of a flower or flowers shall disqualify. Maximum 10 points.

Scale for Size

7½" equals 15 points	5½" equals 11 points
7" equals 14 points	5" equals 9 points
6½" equals 13 points	4½" equals 7 points
6" equals 12 points	4" equals 5 points

GENUS—CYPRIPEDIUM

SHAPE of flower to be symmetrical and approximately circular in form. General appearance to be concave rather than flat or reflexed at the edges. Dorsal sepal to be round, broad, low and to fit in neatly at the base. Edge of dorsal may be neatly waved or goffered. Ventral sepal to be likewise rounded, not pointed, narrow or reflexed; to form a background for the pouch and preferably to show a neat margin around and below the pouch. The dorsal and ventral sepals to fit neatly so that when viewed from the back the general effect is smooth and round, preferably with the upper part of the ventral sepal folding smoothly over the lower portion of the dorsal. Petals to be obovate and may slightly taper to their base; length in proportion to that of the sepals; held to conform with the slightly concave form of the rest of the flower, not to reflex, but neat waving, frilling or fluting not a defect; to be

carried almost horizontally; upper and lower halves to be reasonably balanced. Pouch to be in proportion to other segments, neat, smooth, rounded and so placed and held (tending towards the perpendicular) that it gives conformity and balance to the flower.

Maximum 35 points.

COLOUR shall include white or any other colour or combination of colours. It should be clear, glistening and fresh, not smudgy or blurred. All markings and shadings shall be well defined and evenly distributed.

Maximum 25 points.

SIZE. A flower four inches or over across the dorsal to be allotted full points, with flowers under that size being allotted points proportionately, according to scale.

Maximum 15 points.

TEXTURE. The flower shall be of good substance, refined quality, firm, fresh, lustrous and without any blemish.

Maximum 15 points.

STEM should be strong, firm and hold the flowers well above the foliage to display the flower effectively. Maximum 10 points.

Scale for Size

(Cyp. based on dorsal)

	Pts.		Pts.
4 " or over	15	3 " or over	11
3¾" or over	14	2¾" or over	9
3½" or over	13	2½" or over	7
3¼" or over	12	2¼" or under	5

GENUS—ODONTOGLOSSUM

SHAPE of flower. A well-filled rounded form is most desirable, with sepals and petals wide, well-overlapped and not unduly pointed or twisted near the apices. The flower should have a fairly flat appearance. The lip must be proportionately developed, well-shaped and fully displayed. The edges of the segments may be serrated or frilled provided the rounded form is not destroyed. Maximum 35 points.

COLOUR. Any colour or combination of colours; to be clear, lively and glistening, but not dull or washy; colour markings to be reasonably balanced; the general combination of colours to give a pleasing bright effect to the flower as a whole. The colours of the lip, mask and crest should add attractiveness to the flower. Maximum 30 points.

TEXTURE. The flower shall be of good substance, refined quality, firm, fresh, lustrous and without any blemish.

Maximum 15 points.

SIZE. Shall be measured across the visible limits of the petals and points allotted in accordance with the scale.

Maximum 10 points.

SPIKE to be a suitable length to display flowers gracefully, and to be strong enough to carry the flowers. Maximum 5 points.

FLORESCENCE. Both the number of flowers and the manner in which they are spaced and displayed will be taken into account. A minimum of six flowers is desirable.

Maximum 5 points.

Scale for Size

	Pts.		Pts.
4 " or over	10	3 " or over	6
3 $\frac{3}{4}$ " or over	9	2 $\frac{3}{4}$ " or over	4
3 $\frac{1}{2}$ " or over	8	2 $\frac{1}{2}$ " or over	2
3 $\frac{1}{4}$ " or over	7	Under 2 $\frac{1}{2}$ "	1

GENUS—DENDROBIUM

Nobile Type Hybrids

SHAPE. Should be circular in form, sepals should be wide and evenly spaced with the dorsal erect. Petals should be broad and rounded and spaced evenly between the sepals. The labellum should not project forward nor turn under at the tip. It should be of sufficient size to balance with the rest of the flower. The flower should display itself fully.

COLOUR. Should be evenly distributed, clear and glistening.

SIZE. Credit should be given for size and preferably it should not be under two and a half inches across the petals.

INFLORESCENCE. Pseudo-bulbs should carry a reasonable number of flowers.

Hardwood or Phalaenopsis Type

SHAPE. Should be circular in form, sepals should be wide and evenly spaced with the dorsal erect. Petals should be broad and rounded and spaced evenly between the sepals. The labellum should not project forward nor turn under at the tip. It should be of sufficient size to balance the flower. The flower should display itself fully.

COLOUR. Should be evenly distributed, clear and glistening.

SIZE. Credit should be given for size and preferably the flower should not be under 2 $\frac{1}{2}$ " across the petals.

INFLORESCENCE. The flower raceme should display the flowers evenly and grace-

fully. There should be a reasonable number of blooms on the inflorescence.

GENUS—PHALAENOPSIS

SHAPE of flower to be balanced and flat. Sepals and petals should be wide and rounded. Reflexed sepals or petals or spaces between these segments are defects.

COLOUR should be clear and fresh without blemish. Any colour or combination of colours.

TEXTURE to be firm and without flaw.

INFLORESCENCE. The spike or raceme should have at least seven flowers on a firm stem. Flowers to be evenly distributed and well displayed.

GENUS—MILTONIA

SHAPE. A well-filled oval form is desirable. Sepals and petals should be wide, well overlapped and not unduly pointed nor twisted near the apices. They should be curved back slightly at the tips. The lip must be developed in proportion to balance the flower. It should have a well defined mask and may be scalloped providing the oval form is not destroyed.

COLOUR is to be clear, fresh and without blemish. Any colour or combination of colours, which should be well defined and evenly distributed.

TEXTURE. The flower is to be fresh with good substance and without flaw.

GENUS—VANDA

SHAPE to be rounded and well filled. Sepals and petals should be wide and full.

COLOUR to be clear, fresh and without blemish; any colour or combination of colours.

TEXTURE to be firm and with good substance.

INFLORESCENCE. The raceme should have at least six flowers and be strong enough to support and display the flowers to advantage.

AWARDS AVAILABLE

The recognitions granted by the Society are:

1. A Gold, Silver or Bronze Medal for a single plant, a group of plants, a display or any outstanding contribution to the culture of orchids.

2. An Award of Distinction for a plant with a flower of distinctive characteristics.

3. A Cultural Certificate.

4. A First Class Certificate (minimum 85 points).

5. An Award of Merit (minimum 80 points).

6. A Highly Commended Certificate (minimum 75 points).

7. A Trade Exhibit may be recommended by the Judging Panel for Medals, as in para. 1, or a Certificate of Commendation.

Any recognition granted shall specify that it is for a Trade Exhibit.

RELEVANT BY-LAWS:

The By-laws provide that plants submitted by any member of the Society, Affiliated Societies and Interstate Orchid Societies may be recommended by the Judges for any Award or prize granted by the Orchid Society of New South Wales Limited unless otherwise stipulated provided that:

- (a) The member is financial;
- (b) The member conforms to the Articles and By-laws of the Society;
- (c) The member does not officiate in judgment on his own exhibit;
- (d) (1) Exhibitors resident within fifty miles of Sydney shall submit plants complete with the inflorescence intact for judging for Awards;
- (2) Exhibitors resident over fifty miles from Sydney may submit the complete inflorescence only for judging for Awards;
- (e) (1) An exhibitor shall not artificially manipulate any part of a flower;
- (2) Staking for support shall be permitted but support shall be released before judging except where, in the opinion of the Judges, removal would cause damage;
- (3) Any plant from which buds or flowers have been removed or are missing will be disqualified for judging unless it happened by accident during transport and the detached bud or flower is presented with the plant.
- (f) An exhibitor submitting a plant for an Award of Culture shall provide the Registrar with a Declaration of ownership for the previous two years together with a written account of the mode of culture;
- (g) An exhibitor submitting an exhibit for an Award or a prize in a competitive show shall provide the Registrar with a Declaration of ownership for the past six months, if required;
- (h) The exhibitor shall be considered in the singular only. A joint ownership shall be eligible for Awards but not for prizes;
- (i) The exhibitor shall conform to any reasonable direction given by the President, Registrar, Marshal of the Show or the Secretary;
- (j) The exhibitor when submitting a plant for an Award shall remove all distinguishing

marks or names before handing it to the custody of the Registrar. If the plant is submitted by or through another person the owner shall forward a signed statement that this is being done with his knowledge and consent;

(k) A member may submit a Trade Exhibit for recognition by the Society at the Winter or Spring Shows subject to the relevant By-laws.

THE ACTUAL JUDGING

In actual practice when a plant is submitted for an Award the procedure is as follows:

If it is at a General Meeting the plant may be submitted for judging without notice provided it is tabled and the Registrar or Secretary notified before 7.30 p.m. At a Committee Meeting a plant may be submitted for judging provided that not less than forty-eight hours notice is given to the Secretary and the plant tabled at the time and place directed. A plant will under suitable circumstances be judged at other times when, for instance, it is considered that the flowers would not hold their condition till the next General Meeting or Committee Meeting and in those circumstances two Judges can be deputed to examine the plant and report whether or not, in their opinion, the plant is worthy of judging. If it is decided to judge the plant the Registrar determines the time and place of judging and the Secretary notifies all of the Judges and Associate Judges and the owner of the plant so that arrangements can be made to have it available for judging at the time and place stipulated by the Registrar. When the plant under any of these circumstances is submitted a distinguishing number is allocated to it by the Registrar and that number is used by the Judges in marking their judging card. Particulars of the plant and its ownership are not disclosed and these are treated as confidential by the Registrar and the owner until judging is completed. When the Judges have marked their cards and these have been collected the Registrar determines the result of the judging and submits the assessment and recommendation for Awards and prizes to the Committee for ratification or rejection as the Committee sees fit at the first convenient meeting. An exhibitor whose plant has been recommended for an Award must—

- (1) immediately surrender to the Society a flower selected by the Registrar for the purpose of photographing;
- (2) agree that the photograph shall become part of the record of the Award and remain the property of the Society;

(3) vest with the Society the copyright of the photograph;

(4) furnish a varietal name where this has not already been done.

The Registrar has the custody of the selected flower and procures coloured photographs and reports concerning these duties to the Committee. Incidentally, the coloured photographs are life size prints prepared by Mr. V. Kelaher and painted to exact colour reproduction by a very fine artist, Miss Harwood. They are works of art that will repay your inspection. The whole series is being repaired where necessary and a complete set will shortly be available in the Library for the guidance of members.

After ratification by the Committee the owner is informed in writing by the Secretary of any Award that may be granted and later receives a Certificate of the Award inscribed with the name and variety of the plant, the owner's name, and signed by the President, the Registrar and the Secretary. Such a plant having obtained an Award is not eligible for the same Award, but is eligible for a higher Award.

At Shows and Monthly Meetings a Judging Panel judges submissions or exhibits in accordance with the official schedule where such has been prepared and it has been approved by the Committee and signed by the Secretary on behalf of the Committee. The Judging of District Exhibits and the exhibits of Affiliated Societies at our Shows is an exacting process in which all Judges are required to participate. They allot points under determined headings and these are totalled and averaged. The analysis is always exhibited at the Show and is well worth studying. At all Shows conducted by the Society a meeting of the Committee is held to consider the recommendations for Awards and prizes.

The only body that is recognised as having the power to grant awards within New South Wales is the Society and it is jealous of the high standard that it requires.

The Society's judges by invitation officiate where possible to judge for the prizes allotted by Affiliated Societies at their Shows. They adopt the same standards, but have regard, of course, to the official schedule of the Show. It pays to make a careful study of the schedule of every show in which you are interested.

OBJECTIONS

Any member may raise an objection to the granting of an Award provided the objection is made in writing together with the reasons for it and they are delivered to the Registrar

within seven days of the publication of the Award in the monthly circular. The objection is submitted by the Registrar to the Committee, which makes its decision within one month from receipt of the objection and if the objection is sustained the Committee is required to cancel the Award. In a somewhat similar manner objection may be raised to the granting of a prize at a Show, but in that case the objection and reasons in writing must be rendered to the Registrar during the period of the Show.

CONCLUSIONS

A consideration of a number of the By-laws will enable you to understand what is involved in judging plants for awards or prizes and might I just remind you that the Judges have to act on the available evidence, that is, the plant at the time of judging. At times a plant is submitted where there is obvious evidence that the flowers have been artificially manipulated and the Judges must, of course, reject such a plant as it is unfair to allow it to compete with ones that comply strictly with the By-laws. On the other hand, most lovers of flowers will be anxious to grow and exhibit flowers that are better than those previously exhibited and at the same time will be most careful to see that, in transporting to the place of exhibition a plant on which great care has been lavished, adequate protection is afforded the inflorescence and the individual flowers to see that they are not damaged.

Again, one must realise that the By-laws, and for that matter the standards, are not static and it is within the competence of the Committee to alter these from time to time as experience shows that course to be necessary. Naturally, this article has been written not to suggest ways and means of avoiding the standards or the By-laws as any such course of conduct would be unworthy of the inherently fine people who have made orchid growing such a pleasurable and at times profitable pastime. I mean profitable largely in those intangible values of health giving relaxation and the making of worthwhile friendships. In fact, any advantage gained by avoiding the By-laws and standards could be fairly readily nullified by the Committee in its powers to vary these standards and By-laws as is indicated above.

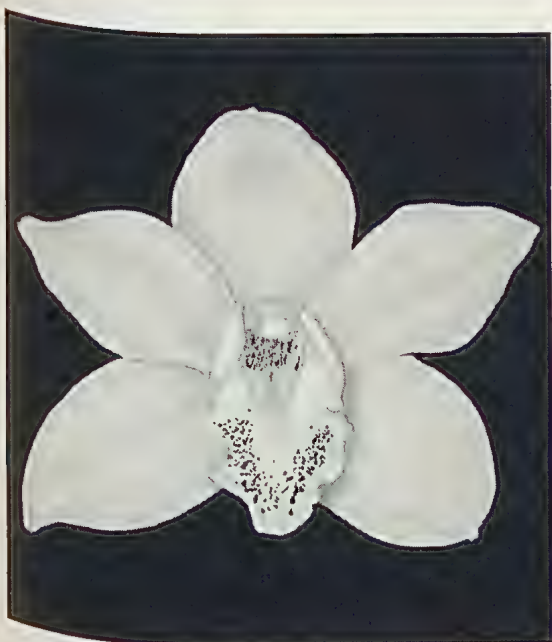
Perhaps we can sum up the position when we say that Awards are granted mainly for the following reasons:

- (1) to reward growers for good culture;
- (2) to encourage hybridists to improve



CYMBIDIUM YORK 'LADY SLIM'

A.M. O.S. of N.S.W. Ltd. 1958. Owner Dos Pueblos Orchid Co. (Aust.) Pty. Ltd. The inflorescence carried thirteen flowers, the size of the individual flower being $4\frac{1}{8}$ inches. The colour (B.C.C.) was Aureolin, and the labellum was heavily flushed banded with cardinal red. The texture was particularly good, the shape was good and the whole effect was most pleasing. Reg. No. 387



**CYMBIDIUM INDEPENDENCE DAY
'BERYL JEAN'**

H.C.C. O.S. of N.S.W. Ltd., 1958. Owner S. G. Cooke. The inflorescence carried seven flowers each 4 inches across, the colour being pale cream and the distal end of the labellum being white with a band of small red spots. The texture was very good. Reg. No. 379.



CYMBIDIUM YORK 'MARGARET OLIVE'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner R. Sand. Fifteen chrome yellow flowers were displayed on an upright stiff stem. Individual flowers were $3\frac{3}{4}$ inches across, of good substance and shape but rather cupped—a concolour with little variation in the petals, sepals and labellum. Reg. No. 392.



CYMBIDIUM CHARMANT 'KURNBROOK GLORY'

Displayed at the Victorian Orchid Show 1958. "The colour was an apricot yellow with reddish tinge. Very good texture, an excellent type that we have been looking for for years."—J. Rentoul.



CYMBIDIUM JOAN LUTH 'JOY'

H.C.C. O.S. of N.S.W. Ltd. 1958. Owner B. Schwartz. This is a much glorified Charm 'Elegance'. It was hybridised by Mr. A. Persson, the cross being Charm 'Elegance' x Magog 'Cameo'. The general colouring is like Charm, being vieux rose streaked with white, but the sepals and petals are not furled and the labellum is about one inch across. The nine flowers were very well displayed and were each 4 inches across. Reg. No. 377.



CYMBIDIUM ROBIN REDBREAST 'LILYVON'

A.D. O.S. of N.S.W. 1958. Owner A. Chalmers. The inflorescence carried two flowers fully opened and ten buds partly opened. The size of the flowers was 4 inches, the colour (B.C.C.) Garnet Lake with the petals and sepals edged white. The labellum was heavily spotted with dark red colouring (Garnet Lake). Reg. No. 383.

species and existing hybrids either or both in form or colour;

(3) to encourage hybridists to evolve new forms and colours of distinction amongst existing genera;

(4) to encourage hybridists to create new worthwhile multigeneric crosses.

Your own experience will tell you whether or not a plant has good form, that is, whether the parts of the flower are well balanced with respect to the other parts and whether all parts unite to form a symmetrical design. The present emphasis is on roundness or the ability to fill a circle without too many open spaces, but roundness in itself must not be given too much weight. Colours should be clear and glistening and texture should be good and, above all, the flower or spray should display itself in a pleasing manner.

Now you be the Judge!

• **THE NORTH SHORE ORCHID SOCIETY:**—It is with pleasure we report a very successful Spring Show, from which we hope to pass on a very substantial cheque to the North Shore Spastic Council, which is receiving the total net proceeds.

The results of the Spring Show judging were as follows:

Champion Cym.—Dorchester 'Jeanette', Mr. W. R. Hall.

Reserve Champ. Cym.—Dorchester 'Jeanette', Mr. W. Englart.

Best Six Decorative Cymbidiums—Mr. F. McKimm.

Best Three Cymbidiums—Mr. S. Cooke.

Best Three Coloured Cymbidiums—Esmerelda, Iris Hepburn and Arncliffe, Mr. R. W. Hall.

Best Yellow Cym.—Cariga, Mr. L. Sasso.

Best Green Cym.—Midlothian 'Green-sleeves', Mr. S. Cooke.

Best Red Cym.—Mayfair 'Collaroy', Mr. R. W. Hall.

Best Australian Native Orchid—*Dendrobium Speciosum*, Mr. C. M. Taylor.

Best Cattleya—Fabia, Mr. L. Sasso.

Best Cyripedium—Clovis, A.M., Mr. R. Trenerry, 1st; Lady Kitty Laura, Mr. L. Sasso, 2nd.

Best Miscellaneous Orchid—Phalaenopsis 'Veau Rose', Mrs. F. Spurway.

Best Shoulder Spray—Mrs. Ball.

Vase of Orchid Blooms—C. M. Taylor.

Arrangement of Orchids—Mrs. F. MacKinney.

Members' Open Classes:

Best Three Cymbidiums—Balkis 'Luath', Balkis 'French's Variety' and Dorchester 'Jeanette', Mr. R. W. Hall.

Best Cymbidium—Mr. J. Preece.

Display of Orchids—Mr. R. Trenerry and Mr. H. French, 1st; Mrs. Ball, 2nd; Mr. F. MacKinney, 3rd.

Best Three Decorative Cymbidiums—Mr. D. Hardie.

Members Only—Novice:

Best Two Cymbidiums—Balkis 'Luath' and Swallow 'Soulangeana', Mr. J. Arnold.

Best Cymbidium—Dorchester 'Jeanette', Mr. P. Clifford.

Best Three Coloured Cymbidiums—Mr. Spence.

The great event of the year was the Orchid Festival at the Sydney Town Hall, and North Shore was again successful in winning the district exhibit with a record margin of points.

The success of a society depends on the co-operation of its members, and there were more plants offered for our exhibit than could be used. In our display were Champion *Cattleya* and *Cyripedium* owned by Mr. Sasso, Reserve Champion *Cyripedium* owned by Mr. Trenerry and Reserve Champion *Dendrobium* owned by Mr. Sasso.

The North Shore Orchid Society concluded the year with a very fine Xmas party. Our compere, Mr. J. Bisset, received a F.C.C. for his effort as a concert promoter, an honour which he has never received as an orchid grower.

The Sydney orchid fraternity was well represented, there being delegates from nine kindred Societies present, including the President of the Orchid Society of N.S.W., Sir John Hall Best.

During the evening Mr. Sasso presented a cheque for £100 to the North Shore Spastic Council, being the profits of our Spring Show.

The following will be the dates for our main functions for 1959:

Winter Show—3rd and 4th July, 1959.

Spring Show—10th, 11th and 12th September, 1959.

Both these functions will be held at Chatswood Town Hall.

We cordially invite all who are interested in orchids and their culture to come as our guests at any meeting during the year. Monthly meetings are held at Chatswood Town Hall on the first Wednesday of each month.—C. M. Taylor.

Some Orchid Pests and Their Control

A. W. F. KURTH

• Before giving an account of the various insects that attack plants in our orchid houses, I think it will be well to insert a general description of insects as so many persons are very ignorant of all that appertains to entomology. A certain amount of knowledge of the life history and formation of the various kinds of insects will enable persons to apply remedies with greater success than would otherwise be possible. To begin with, the life history—the perfect female lays eggs, from these are hatched larvae (caterpillars, grubs, etc.) which, when full grown, become chrysalides, and from which the perfect insects emerge, so that there are four distinct stages—the egg, larva, chrysalis and perfect insects. With butterflies, moths, beetles, flies, ants, bees and wasps, these changes or transformations are well marked, the caterpillar, grub or maggot, which is hatched from the egg, being unlike its parents or the chrysalis. With other insects, such as green fly, scale insects, cockroaches, crickets, grasshoppers, bugs, earwigs and thrips, the transformations are not clearly marked, though they do exist, for the newly hatched insects are more or less like its parents, and, at every change of skin the resemblance becomes more evident. When first hatched from the egg there is no appearance of wings, but when the chrysalis state is reached, the rudiments of wings are visible, but in this state the insects are very active and do not become dormant, as it were, like a chrysalis. When the insect emerges from the chrysalis it is in its mature or perfect state and can then propagate its species, which it was unable to do before. A typical perfect insect has four wings and six legs, but in some there is only one pair of wings, and in others there are none at all, but there are always six legs.

It has now attained its full size, and does not grow any larger. It should always be remembered, therefore, that a small beetle never grows into a large one, or a small fly into a bluebottle, but as they come out of the chrysalis so they remain, after they have stretched their limbs.

Though a typical perfect insect has two pairs of wings and three pairs of legs, some insects, flies, for instance, have only one pair of wings, while beetles and earwigs have only one pair that they can use for flight, the other pair forming wing coverings or cases. All, however, have

six legs. All perfect insects are formed in three parts which are usually very easy to distinguish, namely, the head, which carries the feelers or antennae, the mouth organs and the eyes, the thorax, which bears the legs and wings, and the body, which contains the digestive and other internal organs.

Although spiders, mites, millipedes, centipedes and woodlice are commonly spoken of as insects, they are not, as they do not undergo well marked transformations, they never have wings, have always more than six legs and are not composed of three easily distinguishable divisions.

Insects do not breathe through their mouths as so many animals do, but by means of a series of pores that are on either side of their thorax or abdomen. These pores are easily seen in any large caterpillar as a row of dark dots just above the legs, and communicate with a series of air tubes which permeate the insect in all directions carrying the air to all parts of the body. It is well to bear these facts in mind as it is the position of the breathing pores at the sides of the insect that makes it so desirable in the case of many insects, green fly, for instance, to add soft soap to any insecticide that may be used to destroy them, as the soap forms a coating over the insect which closes the breathing pores and the insect is stifled.

It is also well to remember that there are two quite different kinds of mouths among insects, for some bite and can eat leaves, flowers and shoots and can even bore into hard stems, whilst others can only suck the juices of plants. Those that bite, such as beetles, grasshoppers, earwigs and caterpillars, may be killed by covering their food with some poisonous substance. Those that can only suck, such as aphides, plant bugs and scale insects, cannot be killed in this manner so that a poison having a fumigation action should be used.

Though it is most desirable when possible to use certain means to destroy the insects while attacking the plants, it is even more useful to take steps to prevent the attack being made, and a great deal may be done in this way. Taking a few precautions, never allow weeds to grow in the vicinity of a structure housing plants, as all plants have insects that feed on them and these frequently leave the weeds for the cultivated plants. Nothing in the way of

stones or rubbish of any kind should be allowed to remain on the benches or near any plant, as various insects are very fond of hiding under them. The refuse or plants that have been infested with any insect or fungus should never be put on the rubbish heap as these pests will often come to maturity there.

It is impossible in the present work to mention all the insects that attack our plants, but a selection has been made of those that are generally the more injurious.

The ant: one can hardly help placing these insects among those that are injurious in orchid houses. It will nearly always be found that if an ants' nest be made among the roots of any plant, the roots are attacked by one of the root feeding aphides or scale insects.

This position has been selected in order that they may more easily feed on the sweet secretions of these insects. They exude a sweet sticky substance called honey dew, which is much sought after by ants. In addition, it is unsightly on plants and prevents the leaves from performing their proper function by sealing up the pores. Aphides are a source of continual annoyance as they attach themselves to many families of plants both under glass and outdoors. Control is difficult owing to the rapidity with which the insects reproduce their kind. In addition to the true males and females there is a race of wingless, asexual, viviparous individuals which are produced from eggs that are deposited in the autumn and after laying dormant through the winter are hatched out in the spring. Promptitude is the great thing in destroying aphides, taking steps to eradicate the pests as soon as their appearance is observed; for spraying and dipping plants there are numerous forms of insecticides that are fatal to aphides, and to destroy the pests under glass there is nothing better than fumigation, using the various preparations on the market for this purpose.

One of the most formidable enemies the orchid grower has to cope with is the red spider. The name is somewhat misleading as the insect is not a spider but an eight-legged suctorial mite of almost microscopic size. In colour it ranges from rusty brown to brick red. Though not a true spider it spins a fine web on the under surface of the leaves. When the plant is suffering from an attack of this pest the leaves become yellow or yellowish green mixed with white patches. Bad attacks will cause entire defoliation. The spread of the insect is promoted by dry and warm atmospheric

conditions. These mites may be killed by spraying or syringing the plants with one of the following insecticides — (it must be remembered that the red spider will always be found on the lower sides of the leaves and that the application will be of little use unless it is directed to that part of the plant)—lime sulphur or nicotine sulphate. As these mixtures do not kill the eggs they should be applied two or three times at intervals of five days. The genus thrips contain a considerable number of species, all of which are known to the orchid grower as thrips. These little insects are very troublesome in glass houses. When this is the case spray with D.D.T. to which has been added a small quantity of soft soap or detergent. These insects are very small, being no more than 1/40 inch in length. When mature they are furnished with two pairs of wings which are very narrow and fringed and, when at rest, lie folded over their backs. They injure the plants by sucking out the juices of the leaves by means of a short proboscis. The scale insects are among the most harmful of insects. Some of the many species are familiar to all gardeners.

An idea of the size and importance of the scale insects will be gained from the knowledge that no plant is free from attack by these pests, though specific scale insects will show a preference for a particular type of plant. Should these not be available they will adapt themselves to a wide range of other host plants. The female scales are much bigger than the male and are directly injurious to the plant they infest, sucking out the vital juices; the males are not. At first possessing the power of movement, the females soon lose this. The eggs are sheltered by the familiar horn-like scale, some species having further protection of a white coating of felted threads for their eggs. In a few species the females are viviparous. A favoured hiding place of Diaspis, one of the species attacking Cattleyas, is under the scales sheathing the rhizome and at the base of the pseudo-bulb. A well known and troublesome insect infesting plants is mealy bug—closely related to scale insects; in the scale insects family the female soon loses her power of movement, but the female mealy bug is able to move throughout the whole period of her life. She secretes a viscous fluid which ultimately becomes a covering of white cotton-like substances with which she covers herself and her eggs and young. The female is wingless. Both are really red but covered with the white substance referred to, which disguises their true colour.

Many remedies have been recommended to eradicate this pest, one of the best is white spraying oil and nicotine sulphate. Several of the newer insecticides have effective control. However, it must be remembered that as these mixtures are poisonous, considerable care needs to be taken during their use.

Slugs: in all the species known in our gardens the body is apparently naked, the shell being reduced to the swollen mantle in front. The tongue is used for cutting the food, the horny teeth for masticating it. The ravages of slugs amongst our plants are well known. A well-known brand of spraying material on the market gives excellent control by merely spraying floors, walls, benches and the area in the vicinity of the orchid house. Repeated applications may be made without fear of injury to the plants.

Plant bugs: in using the word "bug", I do not do so in the way that is so common now, as a term for insects in general—there are a large number—but in its proper sense to denominate insects belonging to the family known to entomologists as Hemiptera. There are a large number of different kinds, nearly all living on the juices of plants, but few fortunately are often present in such numbers to inflict much harm upon plants in cultivation. They may be killed by spraying infested plants with D.D.T. Besides the pests already enumerated there are several others, all injurious to the well being of our plants.

Before selecting an insecticide it should always be remembered that some insects feed by sucking the juices of plants, others by eating away the part of the plant on which they are feeding. These insects that have jaws and eat their food can be poisoned, but those that live by suction cannot; a poison having a fumigating effect has to be used. Whatever insecticide be used will probably not kill the eggs, so that, particularly in the case of those insects that undergo their transformations very rapidly, it is essential to use them two or three times with an interval of five days between each application, so as to make sure of killing the young as soon as they are hatched. An ordinary syringe as a rule is not a very good instrument to apply insecticides with, as it is necessary to apply the spraying material in a finely divided form.

—C/- Queensland Orchid Society.

Copy for the next issue of this Review should be received by the Editor before April 11th, 1959.—H.J.L.

• **GOVERNOR OPENS Q.O.S. SHOW:**
—The Governor of Queensland, Sir Henry Abel Smith, believes that orchid growing is a worthwhile pursuit.

Sir Henry, who opened the Queensland Orchid Society's Annual Show in the Brisbane City Hall on 19th September, had earlier pointed out that, to keep young, everyone needs a hobby.

"Orchids can be grown with little expense in our climate," continued the Governor, who added, "Orchid growing is indeed a worthwhile pursuit."

Sir Henry and his wife, Lady May, spent over an hour examining the displays of blooms which had come from throughout the south-eastern corner of Queensland and from California and France.

The French blooms—mainly Cattleyas, Miltonias and Odontoglossums—were from Vacherot and Lecouffe, and those from California were Cattleyas from Rod McLellan Co.

The two-day Show was visited by about five thousand people.

One of the features which attracted a lot of attention was a 15ft. by 12ft. lath bush house stocked with orchids and foliage plants the average grower could expect to have at the end of two years. Each plant was labelled with its name and flowering time.

Another attraction was a display showing Cattleya orchids from the seed pod stage to the adult plant, and the equipment used in raising them.—P.G.C.

• **TASMANIAN ORCHID SOCIETY:**
The Tasmanian Orchid Society has had an outstanding Show—both aesthetically and financially. Mrs. Len Nettlefold charmed all with her natural graciousness when she performed the opening ceremony, to which there was a good attendance.

Miss D. Thorp, a Hobart librarian, won Grand Champion with Swallow 'Conquest'. Mrs. F. Luckhurst, Reserve Champion with Girrahween 'Enid'. Individual Exhibit, Mr. and Mrs. Len Clark, of Launceston. These three competitors were the tops in practically all classes throughout the schedule. We send them our congratulations.

Judges for Individual Exhibits—Dr. Fisher, Mr. F. W. Chilvers. Judges for Orchids as a Whole—Dr. Fisher, Mr. F. W. Chilvers, Mr. A. Cruickshank. President, Miss J. Sargison; Hon. Secretary, Mrs. R. F. Gee.

Queensland Orchid Culture in Autumn

A. W. F. KURTH

• Autumn in Queensland is mainly a waiting and a watching time for orchid growers.

The bulk of the repotting and the major annual attention to the plants will have been carried out in spring in preparation for the main summer growth, so that during autumn the enthusiast is mostly watching for flowers to open or waiting to see if his work in spring and summer is going to bring its reward in the shape of many and fine blooms.

In Queensland—as in all other parts of the world—growers who want to be successful must keep firmly in mind the effects of climate upon orchids, and regulate their growing conditions accordingly.

Queenslanders must keep before them a knowledge of the extremes in climate which are likely to occur in the State, which runs one thousand two hundred miles from the New South Wales border to Cape York. This is especially so in autumn, when drying northerly and chilling westerly winds are a distinct possibility.

Marked changes in temperatures and sometimes prolonged periods of cyclonic rain have also to be well and truly remembered and prepared for.

DENDROBIUMS. In southern Queensland, the *biggibums* and varieties and *schroderianums* and the host of hybrids derived from them have now completed their growths and mature plants are carrying flower spikes.

North Queensland growers with their earlier summer temperatures will have reached the flowering stage with these *Dendrobiums* up to several months ago.

To successfully bring his *Dendrobiums* to perfection in flowering, the grower *must* pay special attention to watering (he must *not* have shrivelled bulbs); to shading (insufficient light will give spindly, soft growths and *no* flowers, while such conditions overhead will mean straggly, sideways-growing weak spikes); plants should not be moved once the spike has started growing or it will twist and turn according to the sunlight direction; the plant is now in really active growth and it is necessary, for the best flower development, to maintain a balanced supply of plant nutrients.

At this stage of the year, great care has to be paid to ventilation. Stagnant air conditions can lead to severe bud drop. In the case of

glass house culture, full use should be made of bottom ventilators.

While it is necessary to take preventative steps against pests and diseases throughout the year, treatment is essential now, when the plant is about to deliver its reward for care and attention since it last flowered.

Red spider is the worst pest at this time of the year, and it is useless spraying unless the pesticide is designed to deal with this enemy. It is most important that the spray be applied to the under surfaces of the leaves as well as to the tops. The initial spraying should be followed with a second within ten days to kill spiders which may have hatched from eggs.

Slugs and snails need attention, too—the walls and underneath portions of the benches should be sprayed thoroughly, as well as the ground and grass outside the bush or glass house.

Care should be taken not to spray the actual plants or their compost too heavily, for some chemicals in slug and snail sprays are detrimental to the best plant growing conditions.

Cockroaches, too, can be troublesome, being very fond of the tender new growths and root tips. Good pesticides are available to deal with them.

CATTLEYAS. With Cattleyas, the growth state in autumn varies widely . . . due to hybridising. Whereas some species can be relied upon to flower in autumn—*labiata* and *bowringiana*—hybrids derived even from them will vary considerably in flowering times.

The culture in autumn must vary according to the state of growth.

A plant growing vigorously must receive more water and more fertiliser than one which is "dormant" after blooming.

With warm days and cool nights at this time of the year, care should be taken to maintain an adequate water supply. A lack will be indicated by shrivelling of the pseudo-bulbs. Even if the plant itself doesn't require water at the roots, it is beneficial to keep the air around moisture laden by spraying.

The compost used in potting the plants is a guide to the amount of water required . . . an open compost will naturally need more.

It is well to remember that with Cattleyas and allied genera it is not advisable to change the plant's position on the bench once the buds

are protruding from the sheath. This will cause poor presentation of the blooms.

As all Cattleyas will have been repotted (or should have been in spring) more time is available now for checking plants for scale. The favourite hiding place is in the dried leaf scale covering the pseudo-bulbs and the rhizomes. Should infestation have escaped the notice of the grower and become heavy, a toothbrush should be used to remove it.

Despite the fact that a Cattleya may require repotting in the autumn, it is inadvisable to do so at this time of the year, for often they will sulk after this operation and won't resume proper growth until spring.

Despite the sub-tropical climate, good Cattleyas can be grown without heat in most parts of Queensland—even in frost zones of Brisbane.

VANDAS. The three different main type of Vandas—terete, semi-terete and strap leaf—require different treatment in autumn.

The teretes and semi-teretes planted in the open, and with the full benefit of sunlight and proper food and water, will be blooming profusely at this time of the year. The compost is of secondary consideration with this type of Vanda. All that is necessary is to replenish the ground cover beneath the plants.

This cover can be lawn clippings, fowl or cow manure, wood ashes or any material that has a tendency to decompose in a fairly rapid manner.

Strap leafs are in active growth now, but they require a good deal more shade than the terete types (broken sunlight is best). These types are growing on ready to produce blooms in the spring. Any extra care given to these plants now will be well repaid later.

Hard persistent scale has a particular liking for strap leaf Vandas, the most favoured hiding place being the deeply channelled space at the base of the leaves. White oil and malathion or nicotine sulphate will deal with this pest, but it is generally necessary to give three complete sprayings to achieve success. The sprayings should be ten days apart.

Strap leaf Vandas growing in shaded positions, in addition to having spindly growth, are prone to crown rot and black spotting of the foliage. The remedy is to first change the location of the plants to give more light, and then to use a good fungicide.

PHALAENOPSES. This is rather a difficult orchid to grow at this time of the year. The species will have finished flowering, and

hybrids (especially those from *amabilis*) will still be producing from branching flower spikes.

This is detrimental to the plant if it is not in a strong, healthy condition. Some careful considerate growers remove secondary flower spikes if it is obvious that the plant is not doing well.

Phalaenopses generally require more light than usual during this period . . . but it must be short of direct sunlight. Water and fertiliser are also necessary.

Special attention should be paid to prevent leaf spotting and attacks by leaf-inhabiting fungi. These two things are most troublesome for Phalaenopsis growers at this time of the year.

More light and ventilation are essential, and then the underside of the leaves should be sprayed with a good fungicide and any water-soaked areas should be cut away and the fungicide heavily applied to the affected part.

CYMBIDIUMS. All Cymbidium plants are growing fast in autumn in Queensland. This growth, though, is detrimental to the production of flower spikes. Plant nutrients should be entirely eliminated from the cultural programme and, where possible, watering should be eased, but light kept up, in the hope that the Cymbidiums will be induced to produce flower spikes.

Cymbidiums are rather prone to virus diseases and they appear to be aggravated by the hot, humid conditions in Queensland at this time of the year.

Any plant showing foliage mottling should be immediately suspect and segregated. Once the disease is confirmed, it should be destroyed by burning.

CYPRIPEDIUMS. Cypripediums are moisture loving orchids. At all times a humid atmosphere is essential and most species are the better for a gentle syringing as opposed to direct hosing at this time of the year.

A close eye should be kept on light — a moderate amount of shading is essential and the correct light will ensure clean, bright foliage.

A few species can be grown in the hottest climatic conditions provided provision is made for keeping the root area cool. This can be accomplished by plunging pots up to the rim in coke breeze.

If a compost has to be prepared for Cypripediums, now is the time to do it, so that everything will be in readiness for repotting in the early spring. The compost should be composed

of equal parts of flaky leaf soil and peat moss.

Pest spraying should be done systematically with this type of orchid, for it is not easy to eradicate scale or mealy bug once they have firmly established themselves in the leaf axils or around the rootstock.

A humid atmosphere will keep red spider in check.

HELPFUL HINTS. A prepared roller blind of clear plastic will be found extremely useful during periods of excessive autumn rain.

As a rule it is convenient to rest many plants during late autumn-winter, but this cannot be done where the plant has a strong inclination to flower at that time, and it is therefore not advisable to keep resting an orchid when its buds begin to swell.

Time and labour in syringing plants — so very necessary in late summer and hot autumn periods—can be saved by installing a fog-spraying system. Five minutes fogging will work wonders on hot days.

• "You know, if you hung it the other way up it would grow better, and with far less chance of rotting out the new growths as you have this year."

"Well, if you think it worth while I'll give it a try; but a look at the growths gives an impression of similarity to other epiphytes, so I don't see what makes you recommend an upside down stance."

Chysis Bractescens was the victim, but to most people it could be another brand of spaghetti with a name like that. Perhaps there are few orchid growers who have seen it. Bractescens is an unprepossessing spectacle as a plant, having a half-way appearance between a Thunia and a Phaius; and then when the leaves are nice and green and the bulb beginning to fatten out nicely, it casts all the leaves and finishes up like a large nude green grub—very large. It's an upside-down grower, too.

However, the flowers make up for all its poor looks as a plant. They are like large white stars, very heavy and waxy in substance, splashed with orange-yellow on the lip and throat and with an attractive perfume. They are about the size of a medium Odontoglossum, and emerge in clusters at the nodes where the leaves are attached to the bulbs, appearing with the new growth like Zygopetalums.

Chysis Bractescens likes heat, as it originates in the steamy jungles of Mexico and Guatemala. Anything that comes from that part of the world should revel in Sydney's summer,

but it would be difficult to find many plants in the whole of Australia.

Like many of our Central and South American orchids, Chysis was discovered and named well before 1850 and the treatment recommended for it was in a cool moist stove. I suppose a cool moist stove would be one under one hundred and twenty degrees but over one hundred degrees, with a liberal application of water. Now that lines up very well with Sydney at its worst moments, so Chysis should be happy there and farther north. But remember to hang it, preferably attached to a piece of fibre, if you are lucky enough to get one. The growths are very brittle, so handle it gently, and it will flower in September or October—a very useful showpiece.

An interesting thing about Bractescens was its use with another Chysis to produce a hybrid strain about 1878, later named Chelsoni. The genus is a small family with about half a dozen members, but possible Bractescens is the most attractive of them.

And finally to correct any misapprehension—Sydney is a lovely place . . . for orchids—J. N. Rentoul.

• **ST. GEORGE ORCHID SOCIETY:** Many new innovations appear to be introduced to this Society during 1959. The Patron, Mr. Frank Slattery, has already introduced a new President, Mr. Walter Jones, at the Annual General Meeting held in February.

One of the new features is the three sections, Novice, Intermediate and Open, in the monthly competitions. This is surely unique in N.S.W. and must eventually give novice growers more chances of being in the prizewinning list.

Mr. Jones spoke of the sterling service to the Society of the resigning President and Treasurer, Mr. H. and Mr. M. Crutch, and expressed the wish that the resignation of Mr. Dick Moffatt, who was a foundation member of the Society, would be only a temporary one. Mr. Moffatt has written articles for the A.O.R. as well as aiding St. George to the position it now holds. The election of officers resulted:

President: W. Jones.

Vice-Presidents: L. A. Peaty, J. Scott.

Hon. Secretary: H. J. Lawler, 535 Willarong Rd., Caringbah.

Hon. Treasurer: F. T. Golding.

Hon. Librarian: A. Bryant.

Committee: A. Gillson, H. Goodwin, H. Griffin, D. Grigg, L. Lyneham, F. Smith, H. Wight.

Cymbidiums in Sydney, 1958

A. B. PORTER

• As the orchid shows go by year after year, there is a gradual weeding out of some of the older orchids which have had their day, and give place to better flowers being added to our collections. It is the ambition of every orchid grower to become the proud owner of a new variety which will dislodge from their pedestals those few outstanding clones which have risen to the top in the struggle for supremacy between thousands of seedlings and imported divisions over the years.

While these few reigning contenders for Championship honours are not easy to beat on the show bench, new orchids are constantly appearing, and a few of them are already taking their place amongst the elite of the orchid world.

Most of the Championship prizes at various shows in the 1958 season were won by orchids which have been well known to Sydney growers for a number of years. Dorchester 'Jeanette' magnificently flowered, carried off the coveted Championship at the Orchid Festival in the Sydney Town Hall and was raised from A.M. to F.C.C. Balkis 'Luath' was Reserve Champion.

These two orchids have been prize winners for a number of years, both having been chosen by the judges as Best Cymbidium in previous Festivals and numerous suburban Shows. Girrahween: 'Enid', another former Festival winner, was successful this year in at least one suburban Show.

The various Shows, however, still illustrate the truth of the well-known fact that to win a Championship it is not sufficient to exhibit a plant of a certain clone. Top honours only go to plants which have been well grown and well flowered, other examples of the same variety often falling far short of the prize.

New orchids of high quality always provide a great deal of interest for orchid growers, and 1958 has produced several Cymbidiums of which more will be heard in future years. One of these was Starlight 'Crown', which was not entered in any Show but received an Award of Merit at one of the monthly meetings of the O.S. N.S.W. The large greenish white flowers, of beautiful form and substance, had deep yellow keels on an otherwise unmarked labellum and were carried on an upright slightly arched spike.

York 'Lady Slim', which received an Award of Merit at the Festival, was a beautiful clear yellow attractively marked with red on the labellum. The well-formed flowers were nicely displayed on an upright spike.

A very fine green Cymbidium, Miretta 'Matchless', was granted an Award of Distinction at the Festival. This was a large green flower, the yellow labellum being strongly marked throughout with bright red and providing a striking contrast to the green sepals and petals.

One of the finest red Cymbidiums we have seen, also an Award of Distinction, was Robin Redbreast 'Lilyvon', which was judged the best red at the Festival.

An interesting new cross seen at some of the early meetings and shows was Samarkand. This is a Westonbirt cross (Heathrow 'Mary Bea' x A.W.B.), but distinguishes itself by flowering considerably earlier than the normal Westonbirt flowering period. While not likely to threaten the champions, some of these, notably the pale greens, make a useful addition to the early Cymbidiums at a time of year when better quality is much to be desired.

Some promising pink Rosaritas were also seen and some of these could well push their way into the ranks of top class Cymbidiums.

Cooksbridges of good quality were seen at several Shows, and at the Festival a new one from this cross won the class for imported seedlings not previously exhibited. The fact that a Cooksbridge was champion a few years ago is sufficient to remind us that any new one is worth watching.

At the beginning of the season, the quality of Cymbidium flowers is still poor, compared to those flowering in spring. Our present June flowers are much better than the *Traceyanum* and *giganteum* crosses of a few years ago, but there is still a lot of room for improvement. Some new early hybrids appeared this year, including a number of crosses from Stardust, notably some nice pink Kuruns (Stardust x Cornette), but there is room for plenty more early ones.

And what of the future? Coloured tetraploids which are now being used as parents will no doubt extend the range of colour in the high class Cymbidiums when their breeding

qualities become known, but it is well to remember that a tetraploid parent has a double dose of faults as well as the good qualities.

Size, number of flowers on the spike, increased range of colour, always combined with good form, will be features constantly sought in new flowers and, of course, the improvement of the early blooms will be a constant quest until—who knows?—even the date of the principal shows may have to be moved forward.

Will we ever hold the Festival in July?

• MANNING RIVER ORCHID SCTY.:

—A seventy-six-years-old man, who was reluctant to exhibit, won the Grand Champion award at the Manning River Orchid Society's Show at Taree on Tuesday, 30th September, 1958.

He was Mr. C. P. Watson, of River St., Taree, who exhibited a Louis Sander 'Kirribilli'. It was his first success in an orchid show.

There were over two hundred entries, as well as non-competitive displays at the exhibition, the first to be conducted by the Society.

Intending exhibitors had to be turned away because of lack of space. The blooms were valued at almost £4,000.

The reserve champion was exhibited by Mr. E. W. Hibble, of Forster. It was a magnificent *Cygnus* 'Opalescent'.

A former President and judge of the N.S.W. Orchid Society judged the exhibits at the exhibition.

He was Mr. Wal. Rothwell, of Forster, who said the winning exhibit was outstanding in its class, with well formed flowers and good colour.

Mr. Rothwell commended the Society on its "very creditable" first exhibition. "A pleasing feature was the way it was supported by people who put in blooms which were non-competitive," he said. "There was a magnificent display by Mr. Redriff, of Teralba, while Mr. Bond also brought up cut sprays of excellent flowers from Newcastle; also Mr. Bordgland, of the Lismore Orchid Society."

Mr. Rothwell and patron of the Society, Mr. J. Folkard, were also among exhibitors who displayed on a non-competitive basis.

A large crowd attended the evening session. Patron of the Manning River Orchid Society, Mr. J. Folkard, welcomed displayers and exhibitors from out of the district. These included Mr. W. Redriff, of Teralba, Mr. Hibble, of Forster, and Mr. Hannington, of Wauchope.

Mr. Folkard said the Society had a great worker in Mr. George Coleman (secretary), who had done a good job.

Mr. Bond congratulated the Taree Society on its first show, and said the blooms were of excellent quality and were equal to any seen elsewhere.

"Next year," said Mr. Bond, "there should be alterations to the schedule, more classes and sections added and perhaps exhibitors and blooms."—T. R. B. Boyce.

JOIN THE ORCHID SOCIETY OF N.S.W.

Membership entitles you to:—

- Twelve issues of the Monthly Circular containing Cultural Notes for each calendar month as well as a description of the various plants tabled for competition.
- A comprehensive Orchid Library—Books can be procured on loan for one month.
- Regular Monthly Meetings in the Y.W.C.A., Liverpool St., Sydney.
- A Letter Service for Country Members desiring cultural hints.
- Four quarterly issues of this Review if required.

Write for a nomination form to Secretary

K. LAMONT 42 LAWLEY CRESCENT, PYMBLE



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
"Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and
fawn.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/. Pale mauve.
D. Hildebrandii, 30/-. White &
yellow.
D. Densiflorum, 25/-. Yellow.

D. Jamesianum, 25/-. White & red.
D. Primulinum, 25/-. Pale to dark
mauve.
D. Fimbriatum, var. oculatum, 25/-.
Yellow, maroon throat.
D. Farmerii, 20/-. Pale Pink.

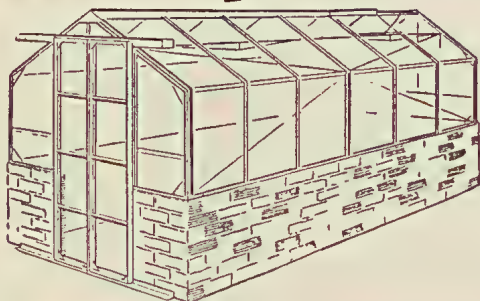
AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet

Price: £91-6-0

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

NEW ADDRESS

All Orchid Friends and Correspondents please
note I have moved from Lane Cove. Future
address will be

R. E. TRENNERY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE, N.S.W.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

A "must" for all true orchid lovers—

ORCHIDS IN AUSTRALIA

by FRED MOULEN

*Contains 100 natural-color plates of the best orchids grown for
show-bench and florist flowers.*

Available NOW at leading Bookstores and FRANK SLATTERY'S
12 Eddystone Rd., Bexley, N.S.W., Aust. Price £6/6/-. Post 2/-

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bend (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

Books For Christmas Gifts

- SUCCESSFUL ORCHID CULTURE (P. R. C. Rittershausen). Illst. 18/9. Post 1/3d.
ORCHID HANDBOOK. (Compiled John Bisset and others, for Orchid Soc. of N.S.W.) Illst., 8/6. Post 6d.
ORCHIDS & THEIR CULTIVATION (David Sander). Illst. £1/9/-. Post 1/3d.
YOU TOO CAN GROW ORCHIDS (Handcock & Smith). Illst. 16/6d. Post 6d.
ORCHIDS AS HOUSE PLANTS (R. T. Northen). Illst. £2/5/-. Post 1/6d.
ORCHIDS (Lecouffe & Rose). Col. plates, £1/8/3. Post 1/3d.
ORCHIDS IN AUSTRALIA (Fred Moulen) 100 superb colour plates, full cultural methods. £6/6/-. Post 2/-.
100 INDOOR PLANTS—Their Care & Cultivation. (A. C. Muller-Idzerda). Illst. 17/6d. Post 7d.
JAPANESE FLOWER ARRANGEMENT (E. G. Allen). Illst £1/0/9. Post 7d.
THE ART OF GROWING MINIATURE TREES, PLANTS & LANDSCAPES (T. Ishimoto). Illst. £1/10/6. Post, 1/3d.
SIMPLE PRACTICAL HYBRIDISING FOR BEGINNERS (D. G. Thomas). Illst. 18/9d. Post 1/-.
SOIL-LESS GARDENING FOR FLAT & HOME (Maxwell Bentley). Illst. £2/-/-. Post 1/-.
BRUNNING'S AUSTRALIAN GARDENER, 34th completely revised edition. Illst. £1/10/-. Post 1/3d.
We search the world successfully for Rare and Out-of-print Books.
Also New and Second-hand Books on Australian, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.
We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists:
10X British Aplanatic folding Magnifiers—of great use to Orchid lovers. £2/18/6.

Write for Christmas Lists.

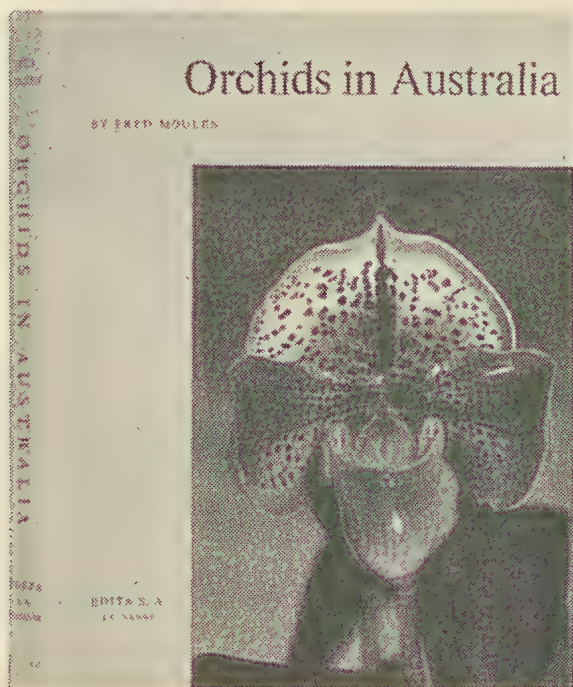
N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

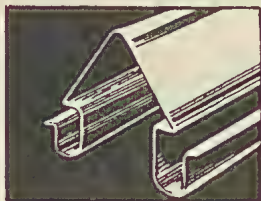
The Orchid Book that has won world Acclaim!



Contains 100 natural colour plates, many life-size, of the best varieties of show-bench and florist type orchids selected from leading collections in Australia; includes 30 different hybrids and species. Introduction by Sir John Hall Best (Pres. Orchid Soc. of N.S.W.). Preface by Dr. J. A. Vote (Past Pres. O.S.N.S.W.). Press reviews:—

Syd. Morn. Herald: "This is one of the year's most beautifully produced books. The colour plates are of sustained and often breathtaking beauty." *Aust. Orch. Review*: "The magnificent photography will appeal to all lovers of flowers whether orchid growers or not. The text is in a style that can be digested by amateur and professional alike. Truly a unique volume to become a collector's item." *Your Garden (Melb.)*: "Few books on orchids appear in a lifetime in the category of 'Orchids in Australia', a superb production written and illustrated by Fred Moulen. A book that should be a part of the library of all orchid growers". *Amer. Orch. Soc. Bulletin (Harvard Univ. U.S.A.)*: "An excellent book for those who are interested in orchids, also for the collector of beautifully printed works. A handsome volume of lasting interest and use—one to be read with pleasure and referred to again and again". *Aust. Garden Lover*: "To the orchid fancier this book will be indispensable. To all lovers of flowers it will commend itself on sight as a source of constant interest and lasting pleasure". Printed in Switzerland, Limited Edition. 148 pp. 10½" x 8" hard cloth bound. Price £6/6/- Post 2/-, Book Dept. (A). Warnes Shell Lime Co. Pty. Ltd. (Est. 1882), Canal Rd., St. Peters, SYDNEY, N.S.W., Australia.

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	87/- per case
Loose Sheets—Price extra.							

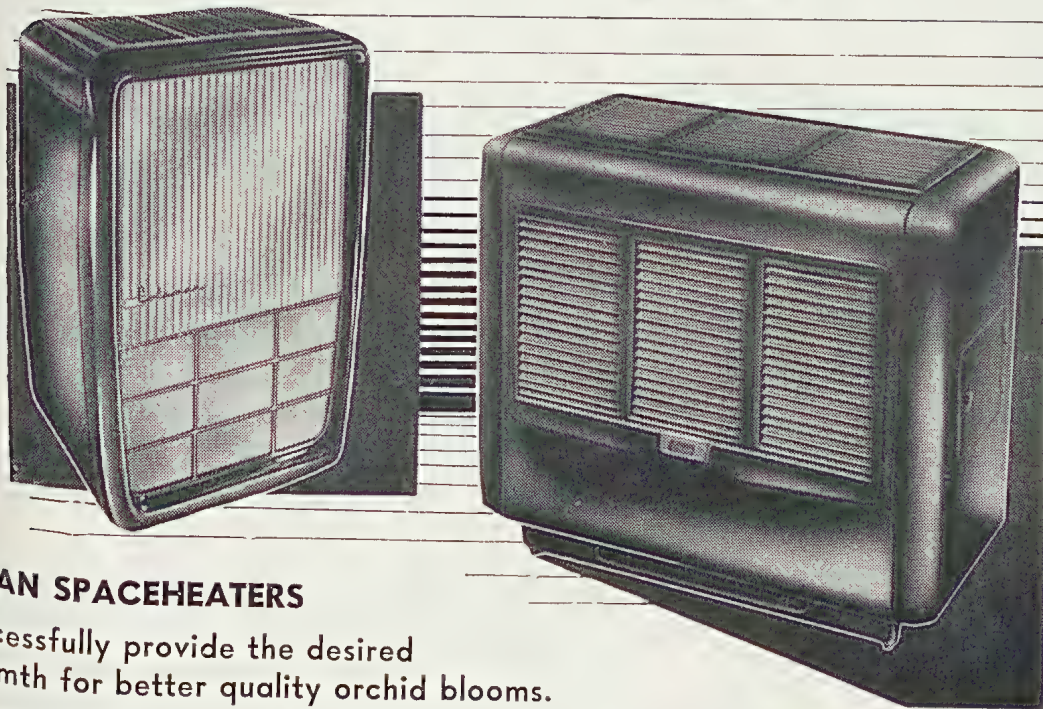
SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
 49 Aird Street, Parramatta — YL9961
 135 Forest Rd., Hurstville — LU2066
 67-69 Burelli St., Wollongong—B3301-8
 932 Pacific Highway, Chatswood—JA3462

Don't wait for winter...

OVERCOME YOUR GLASSHOUSE HEATING PROBLEMS
NOW AND MAINTAIN **TROPICAL TEMPERATURES**
THROUGHOUT THE COLDEST WEATHER - - - -...

**With a SWAN SPACEHEATER fumes are totally
eliminated — NO MORE "BUD DROP"**



SWAN SPACEHEATERS

successfully provide the desired
warmth for better quality orchid blooms.

- No attention required • Silent operation.
- Constant temperatures maintained • Absolutely odourless

THE INEXPENSIVE FUEL OIL CAN BE
DELIVERED TO YOUR NURSERY, CITY OR
COUNTRY, BY THE MAJOR OIL COM-
PANIES.

SELECT **SWAN** FOR
YOUR **COLEMAN** HEATER
FREE SURVEY SERVICE

SWAN REFRIGERATION (DISTRIBUTORS) PTY. LTD.

*Refrigeration, Heating
& Air Conditioning Engineers*

93 WILLIAM STREET,
SYDNEY

FA 9378

SEND THIS COUPON NOW FOR FREE DETAILS
OF ALL GLASSHOUSE HEATING REQUIRE-
MENTS.

NAME:

ADDRESS:

O.R. 1/59.



No. 24
(See List "Limberlost" Seedlings below)

Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas



"LIMBERLOST" Orchid Seedlings

*First General Offering of Orchid Seedlings to Old
and New Growers. Fascinating Hybrids that will bring
both Pleasure and Profit as they mature.*

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10. Vanda Tatzeri x V. Caroline Robinson.
- No. 13. Vanda Mary Foster x V. Gertrude Miyamoto.
- No. 37. Vanda Tatzeri x V. Coerulea.
- No. 46. Vanda Suavis x V. Sanderiana.
- No. 40. Phalaenopsis Denevei x Arachnis Maggie-Oei.
- No. 24. Dendrobium Schroederianum bicolor.
- No. 27. Dendrobium Broomfieldii x D. Janice Tanaka.
- No. 39. Dendrobium Broomfieldii x D. Phalaenopsis var. Snow White.
- No. 48. Dendrobium Bigibbum x D. Veratrifolia.
- No. 57. Dendrobium Tofftii x D. Phalaenopsis var. Snow White.
- No. 58. Dendrobium Tofftii x D. Phalaenopsis var. Snow White.
- No. 175. Dendrobium Aureckleii x D. Phalaenopsis var. Snow White.
- No. 254. Dendrobium Bigibbum x D. Mirbellianum.
- No. 255. Dendrobium Anouk x D. Agnes Ann.
- No. 258. Dendrobium Lady Hamilton x D. Helen Fukumura.
- No. 177. Dendrobium Phalaenopsis Alba x D. Phalaenopsis var. Snow White.
- No. 134. Dendrobium Superbum giganteum x D. Superbum var. huttonii.
- No. 193. Dendrobium Dicuophum x D. Canaliculatum var. pallidum.
- No. 232. Dendrobium Sanders Crimson x D. Tangerine.
- No. 149. Cymbidium Aloifolium x C. Bicolor.
- No. 30. Vanda Henrietta Ho x Arachnis Maggie-Oei.
- No. 35. Vanda Dearei x Arachnis Ishbel.
- No. 36. Vanda Henrietta Ho x Arachnis Ishbel.
- No. 55. Vanda Alice Fukunaga x Arachnis Maggie-Oei.
- No. 60. Vanda Tatzeri x Arachnis Ishbel.
- No. 63. Vanda Henrietta Ho x Arachnis Insignis.
- No. 75. Vanda Tatzeri x Arachnis Ishbel.
- No. 71. Vanda Tatzeri x Arachnis Insignis.
- No. 32. Vanda Henrietta Ho x Vanda Dearei.
- No. 22. Vanda Ernest Fujinaga V. Sanderiana.
- No. 56. Vanda Cooperii var. Choo Yam Neo x V. Joaquim var. Atherton.
- No. 141. Opisanda Kenneth Morley x Vanda Kon Tiki.
- No. 194. Vanda Teres Alba x V. Ellen Noa.
- No. 200. Vanda Manila x V. Gilbert Triboulet.
- No. 242. Vanda Diana x V. La Paloma.
- No. 237. Vanda Parishii var. Marriottiana x V. Ellen Noa.
- No. 147. Vanda Tatzeri x V. Suavis.
- No. 97. Vanda Madam Dinger Java variety x V. Alice Fukunaga.
- No. 142. Vanda Manila x V. Alice Fukunaga.
- No. 151. Vanda Kon Tiki x V. Manila.
- No. 166. V. Alice Fukunaga x V. Denisoniana var. herbraica.
- No. 150. Vanda Manila x Ellen Noa.
- No. 164. Vanda Ellen Noa x V. Suavis.
- No. 153. Vanda Queenie Pie x V. Manila.
- No. 136. Vanda Manila x V. Suavis.
- No. 184. Vanda Manila x Opisanda Kenneth Morley.

ABOVE PLANTS 2" to 6" (depending on variety) 7/6 each £4/4/- per doz. (Assorted if desired).

No. 163. Dendrobium ANOUK (D. Phalaenopsis FCC self x D. Pompadour) 4" to 6"—15/- each.

PHALAEOPSIS SEEDLINGS

- No. 197. (Rothschildiana x Avalanche) x Bess Wells.
- No. 198. Lachesis x Marmouset.
- No. 216. Doris x Venustus.
- No. 217. (Marmouset x Ruby FCC) x Reve Rose.

ABOVE PLANTS 2" to 3" 15/- each.

Please add 7/6 with orders to cover Air Freight and forwarding charges
If phone number, please add.

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.Q.

UNSURPASSED QUALITY ORCHIDS

by

(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings

C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42

Cables: VALEC

Boissy St. Leger.

ODONTOGLOSSUMS ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.

D. Chrysotoxum, 30/-. Yellow.

D. Dalhousianum, 30/-. Cream and
yellow.

D. Formosum, 30/-. White & yellow.

D. Nobile, 30/-. Purple.

D. Primulinum, 25/-. Pale to dark
mauve.

D. Fimbriatum, var.: oculatum, 25/-
Yellow, maroon throat.

D. Farmerii, 20/-. Pale pink.

D. Moschatum, 30/-. Apricot.

D. Pierardii, 30/-. Pale mauve.

D. Hildebrandii, 30/-. White and
yellow.

D. Densiflorum, 25/-. Yellow.

D. Jamesianum, 25/-. White & red.

AIR FREIGHT EXTRA. ALL FLOWERING SIZE PLANTS

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

*The World's Most Eminent and Successful
Breeder of Outstanding Hybrids*

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application. . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids.

*Six superbly sturdy
seedlings, 4
sturdy bulbs from 2 inch
pots, to flower
after
two years:*

Cattleya Annette x L. C. Cynthia alba Model.

Cattleya Ballantineana x B. C. Hartland.

Cattleya Aurea x B. L. C. Cadmium.

L. C. Clothilde x B. L. C. Nugget.

L. C. Nina splashed x C. Hardyano—Warnerii.

B. L. C. Hartfield extra dark x Cattleya Horatius.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges paid, and insured—for—Twelve pounds ten shillings sterling.

Illustrated Catalogue and Lists sent upon application.

STUART LOW (Benenden) LTD.

JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

The Shepherd Press announce a Fourth Edition of

THE SMASH-HIT COOKERY BOOK

from the editors of "The Garrulous Gourmet"

"Oh, for a French Wife!"

by TED MOLONEY and DEKE COLEMAN

Profusely illustrated with line drawings by George Molnar.

"FRENCH WIFE," with 110 gaily illustrated pages of recipes, and the art, chemistry, and philosophy of cooking.

19/6 EVERYWHERE

THE SHEPHERD PRESS

•

Yurong Street, SYDNEY, N.S.W.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

MON., MARCH 30th MON., APRIL 27th MON., MAY 25th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

FRI., MARCH 13th FRI., APRIL 10th FRI., MAY 8th

Patron: Sir JOHN B. CHANDLER

President: E. A. KNOBLAUCH

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

MON., MARCH 16th MON., APRIL 20th MON., MAY 18th

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide

THURS., MARCH 5th THURS., APRIL 2nd THURS., MAY 7th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: R. J. LANGDON, 8 Regent St., Millswood

Hon. Secretary-Treasurer: F. C. BRIDGE, Elizabeth St., Woodside. Phone 01, Woodside 69.

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

FRI., MARCH 27th FRI., APRIL 24th FRI., MAY 22nd

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Hon. Secretary: H. W. HILL, 20 Waterford St., Inglewood.

Hon. Treasurer: A. A. FARRANT, 32a Coode St., Mt. Lawley.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* Miss J. Sargison. *Hon. Secretary:* Mrs. R. F. Gee,
16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.

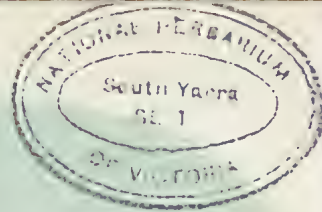


Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276



Australian Orchid Review

PUBLISHED QUARTERLY

VOLUME 24, No. 2

PRICE 3/6

JUNE, 1959



A PHANTASY WITH PHALAENOPSES

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

... Enchanting ...



L.C. SENNORA 'LUSTRE'

Here is an excellent opportunity to add new varieties to your collection at reasonable cost.

VANDAS. Latest American strap leaf and semi-terete types. A good variety of these plants available in various sizes. Plants offered include the famous "NELLY MORLEY" John Noa's, Original 512 cross.

CATTLEYAS. A good selection of modern hybrids nearing flowering size.

MILTONIAS. Flowering size plants. Latest French hybrids.

PHALAENOPSES. Seedlings available in pinks and whites.

CYMBIDIUMS. All the top-class awards and show varieties on hand. Also top-line scarce types namely RIO RITA 'RADIANT', F.C.C.R.H.S., MIRETTA 'MATCH-LESS', Best Green and Award of Distinction N.S.W.O.S. Festival, 1958. Marmie Kingsford 'Erin', H.C.C. Aldis Lamp 'Arncliffe', Nam Khan 'Naomi', Balkis 'Jeanette' and many others.

HUNDREDS OF BACK BULBS TO SUIT EVERYBODY

... Frank Slattery's ...

... Orchids ...

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

They are all sturdy bush-house grown plants ex 4" pots. Lists Available.

SUSSEX 'LAELIA SASSO' H.C.	x PEARL 'MAGNIFICUM' F.C.C.	15/-
" " " "	x MONICA THE FINEST	10/-
" " " "	x ATHENS 'TANANDRA'	15/-
" " " "	x PROFITA 'LUATH' H.C.	20/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x FASCINATION No. 2 (RED)	15/-
FIREBIRD 'DOVER HEIGHTS'	x OLYMPUS 'ROSY QUEEN'	15/-
PEARL 'MAGNIFICUM' F.C.C.	x	10/-
" " " "	x MIDLOTHIAN 'GREENSLEEVES'	15/-
" " " "	x ATHENS 'TANANDRA'	15/-
PINK BEAUTY	x PEARL 'MAGNIFICUM' F.C.C.	10/-
RUSPER 'WAVERLEY' A.D.	x	10/-
BALKIS 'LUATH' A.M.	x CARISBROOK " "	20/-
" " " "	x REMUS F.C.C.	20/-
" " " "	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
CARIGA 'SORRENTO'	x SWALLOW	15/-
CARIGA 'SORRENTO'	x SUSSEX 'LAELIO SASSO' H.C.	20/-
CARIGA 'JULIA'	x SWALLOW	10/-
SPARTA 'ETNA' A.D.	x CARISBROOK BRICK A.D.	10/-
LUCIFER 'DIANNE' A.D.	x PINK BEAUTY	10/-
ALEXANDERII 'WESTONBIRT' F.C.C.	x MIDLOTHIAN GREENSLEEVES H.C.	15/-
" " " "	x FIREBIRD 'DOVER HEIGHTS'	15/-
" " " "	x BLUE SMOKE No. 1 (CALIFORNIA)	20/-
" " " "	x PEARL 'MAGNIFICUM' (JADE)	15/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x SPARTAN QUEEN 'MERRILONG' A.D.	15/-
PAUWELSII C. De HEMPTINE F.C.C.	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
REMUS F.C.C.	x CARISBROOK THELMA A.D.	15/-
SPARTAN QUEEN MERRILONG A.D.	x	15/-
MAYFAIR F.C.C. 'STONEHURST' "	x FASCINATION 'CRIMSON' GLORY' A.D. ...	20/-
	x REMUS F.C.C.	15/-
	x REMUS F.C.C.	20/-

The nursery is open 7 days weekly and visitors are always welcome.

Plants are sent everywhere in Australia or overseas on request.

PLEASE SEND STAMPED ADDRESSED ENVELOPES FOR LISTS

Phone
LY7985

12 EDDYSTONE RD., BEXLEY

(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985

... For Perfection ...



JUDY

Seedlings flowering for the first time from our cross 4033.4046

Rosalita Dos Pueblos x Rosanna Pinkie FCC/RHS

Pinks — Whites — Blush pinks

The above photograph is of the seedling JUDY fiesta (HCC, A.O.S.) which was bloomed at Goleta, California, in April 1959. It is a fine example of the material which can be expected from this cross. Excellent quality pinks for commercial flower production and many award types can be anticipated from this splendid combination.

5" Pot. £4.10.0

6" Pot. £5.10.0

8" Pot. £12.10.0

dos pueblos

Orchid Company
(AUST.) PTY. LTD.

DEE WHY

Telephone:
98-6321

P.O. BOX 28

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.



ROSARITA

Seedling flowering from our cross 251

Alexanderi Westonbirt FCC/RHS x Carisona 'Glendessary'

The above photograph is of ROSARITA MIDNIGHT; Bronze award, Cymbidium Society. Silver A.O.S., was flowered in California in April 1959.

Blush

Pastel Pinks

Rose

Hundreds of ROSARITAS will bloom this spring. Percentage wise, this cross has proven to be most exceptional.

WE HAVE YET TO SEE A SINGLE PLANT OF ROSARITA YIELD FLOWERS OF POOR QUALITY.

Divisions of the blooming plants may be selected during the current flowering season for early delivery.

dos puebl

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

Mail orders are
carefully filled.
Inquiries are
invited.

Telephone:

98-6321

P.O. BOX 28

N.S.W.

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality.



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cypridiums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim

- | | |
|-----|--|
| 304 | Vanda tricolor x Vanda Sanderiana |
| 11 | Dendrobium Schroderianuf x Dend. taurinum. |
| 218 | „ veratrifolia x „ Broomfieldii |
| 689 | „ Miyamoto x Vanda dearei |
| 643 | „ tricolor x Vanda Luzonica |
| 647 | Arachnis Maggie Oei x Vanda Sanderiana |

30/-
EACH
3" POTS.
AVERAGE
7" to 9"
HIGH

15/-
EACH
2" POTS
AVERAGE
4" to 8"
HIGH

- | | |
|------|--|
| 830 | Dendrobium veratrifolia x Dend. taurinum |
| 689 | „ Miyamoto x Vanda dearei |
| 643 | „ tricolor x Vanda Luzonica |
| 964 | „ broomfieldii x „ |
| 868 | „ Miyamoto x Renanthera Storei |
| 730 | „ suavis x Renanthera Storei |
| 772 | „ Hawaii Nui x „ stratiotes. |
| 942 | „ Ishbel x Vanda Manila |
| 836 | Dend. Schroderianum x Dend. taurinum |
| 1021 | „ Toftii x Dend. Phalaenopsis alba. |
| 218 | „ veratrifolia x Dend. Broomfieldii |

- | | |
|------|--|
| 836 | Dend. Schroderianum x Dend. taurinum |
| 830 | „ veratrifolia x Dend. taurinum |
| 964 | „ Broomfieldii x Dend. taurinum |
| 1021 | „ toftii x Dend. Phalaenopsis Alba. |
| 772 | „ Hawaii Nui x Dend. stratiotes |
| — | „ superbiens x Dend. Schroderianum FCC. |
| 1037 | „ Bali x Dend. Mauna Kea. |
| 643 | Vanda tricolor x Vanda Luzonica. |
| 689 | „ Miyamoto x Vanda dearei |
| 882 | „ Mary Foster x Vandopsis lissochiloides |
| — | „ Flamerolle x Vanda suavis. |
| 650 | „ Boschii x Vanda Sanderiana |

8/-
EACH
OUT OF
COMMUNITY
BASKETS.
AVERAGE
3" to 5"
HIGH

Add Postage and Air Freight

KIRKWOODS ORCHIDS

342 SHERIDAN STREET, CAIRNS, NORTH QUEENSLAND

ORCHID SUPPLIES

from FRANK SLATTERY

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

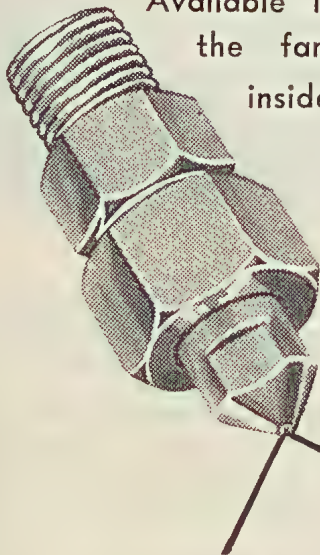
Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 8d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

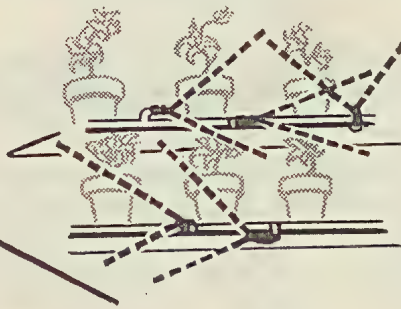
Australian Todea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "**MONARCH**"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT

**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown *Odontoglossum* and *Odontioda* seedlings in large variety at exceptionally low prices.

Miltonia seedlings, both French and English raised.

Hawaiian *Dendrobium* seedlings of the best crosses, from 10/-

Hawaiian *Vanda* seedlings, latest crosses of the highest quality, from 10/-.

French and American *Phalaenopsis* seedlings, ranging in price from 25/- to 90/-, according to size and cross.

Intergeneric *Oncidium* seedlings of interest at 10/- each.

Some exceptional *Sophrolaeliocattleya* seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of *Cattleya* seedlings in all sizes for you to select from. These range in price from 20/- for small seedlings, and from 55/- for seedlings of full flowering size. Many *Cattleyas* can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight. charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

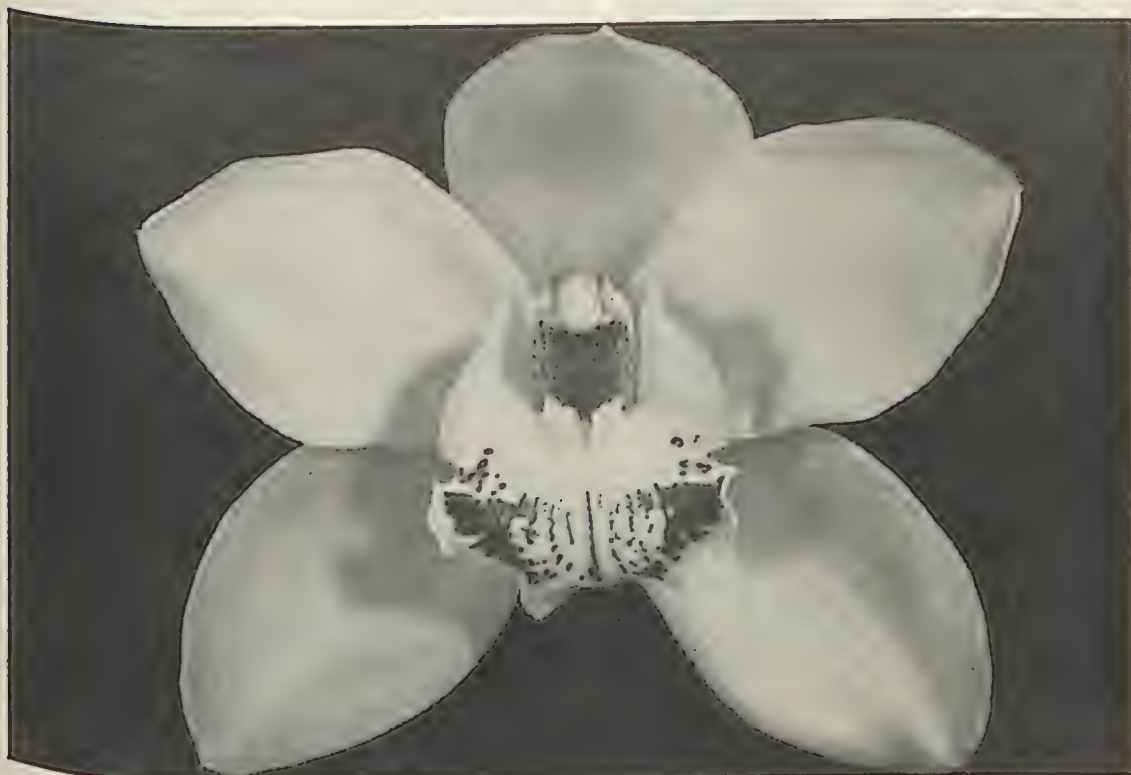
Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

CYMBIDIUMS

Complete Collections for Sale

Arabella Waverley, H.C.,
A.M.
Carisbrook Florence, A.D.
Cassandra Evadne, A.M.
Cassandra Toxteth, A.M.
Celia Tanandra
Ceres F. J. Hanbury,
A.D.

Charm Elegance, A.M.,
H.C.
Cordelia Kuringhai, A.D.
Cygnus Janet
Dracula No. 1
Esmerelda
Falcon Illawarra

Flamingo Allambie, H.C.
Gloriana Tudor Rose
Historian Lindfield, H.C.
Joyance Cinnamon, H.C.
Joy Sander Triumph
Louis Sander Girrahween
Plover No. 1

President Wilson Haber-
field
Princess Elizabeth Giant
Princess Margaret Haber-
field
Swallow Conquest, H.C.
Swallow Daffodil, H.C.,
A.M.

Back Bulbs: For any 6 of the above varieties, £7; 12, £10; for the whole 24, £18.

Young Green Plants: For any 6 of the above varieties, £10/10/-; 12, £15; for the whole 24, £27. All plants at these prices are first-year green plants (two-seasons to flower) grown from back bulbs (with the back bulbs still attached in nearly all cases) well-established, healthy and guaranteed.

Flowering Size Green Plants: For any 6 of the above varieties, £21; 12, £30; for the whole 24, £56. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS

Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

**SPECIAL FINANCIAL SERVICE FOR
NEW ZEALAND CLIENTS**

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

FREE!

Free copy of 1959
"Catalogue and Price
List" now available.



Back Bulb only.



Young Green Plant.



Flowering Size Green Plant.

Haberfield Orchid Nursery

*The Oldest Established Commercial Cymbidium
Specialists in Australia.*

37 Dobroyd Parade, Haberfield (Sydney), N.S.W. Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2536

Australian Orchid Review

VOLUME 24

JUNE, 1959

No. 2

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Annual Shows	81
Codes of Nomenclature as They Apply to Orchids— <i>W. W. G. Moir</i> ...	91
Composts— <i>G. L. Piper</i>	71
Cymbidium Culture, Development in— <i>York Meredith</i>	72
Cymbidiums—Beds or Pots?— <i>J. N. Rentoul</i>	82
Front Cover	81
Miscellaneous Orchids for Pleasure— <i>E. F. Moffatt</i>	66
News and Notes	65, 71, 74, 75, 77, 80, 81, 84, 90, 94, 97
Orchid Culture in South Australia— <i>Wesley Harris</i>	75
Pauwelsii, My	64
Pendulous Orchids— <i>G. Hermon Slade</i>	89
Sterilising Orchid Seed for Planting— <i>W. E. Graves</i>	86
Watering and Conditions of Orchids, The Care of— <i>C. A. Hilsden</i> ...	76
Winter Care for Orchids in Southern Queensland— <i>G. L. Piper</i>	85
Winter Culture in N.S.W.— <i>H. J. Lawler</i>	78
Winter Culture in Tasmania— <i>F. W. Chilvers</i>	95
Winter Shows	81

ILLUSTRATIONS

Cattleya Galliard 'Rapallo'	87
Coelogyne Cristata	71
Dendrobium Amy	71
Dendrobium Claire Nishimura	71
Epidendrum Parkinsonianum	88
Laeliocattleya Hertha 'Rosemont', A.M.	87
Miltonia Vexillaria 'Lyoth' (colour)	87
Odontioda Margia	70
Odontoglossum Perryanum	70
Odontonia Salam	70
Oncidium Jonesianum	88
Vuystekeara Estelle Jewel	70

Personnel

Hon. Editor: H. J. Lawler, 535 Willarong Rd., Beauty Point, Caringbah, N.S.W. Phone: LB9442

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

W. Harris
17 Old Belair Rd.,
Mitcham

WESTERN AUSTRALIA

A. C. Dawson
17 Alness St.,
Applecross

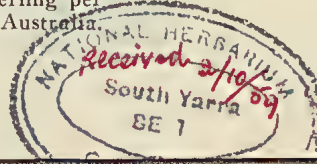
TASMANIA:

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.



My Pauwelsii

• During the Easter holiday period my master conveyed me in a suitcase, hidden between his nightshirt and his shaving gear, to the City of Churches—Adelaide.

The entry of plants into South Australia is subject to approval by the usual quarantine inspector, who would have no hesitation in taking a peeled apple from an infant's mouth and subjecting this one-time forbidden fruit to methyl bromide treatment before returning the morsel for further childlike subdivision.

Never before has my master been subjected to such "friendly" treatment. Speaking from my uninterrupted point of view, may I explain the trials and tribulations that we encountered, once the three-hour flight from Sydney was completed and the inspection of new arrivals was made.

In the city of Adelaide no nightshirts need be used. It is hot and dry (hotels close at 6.30 p.m.), the temperature hovers around the nineties day after day and it is nothing for the century mark to be attained for a week. It was most fortunate that my master had to shave, otherwise I could not have endured the holiday for long in a suitcase, but for now what I saw and heeded is more important.

The Orchid Society of South Australia exists without the aid of guessing competitions, auctions or any other means of raising money that can be considered a form of chance or gambling. This "morality" seems quite preposterous when all forms of amusement were permitted to open their doors at 1 p.m. on Good Friday during the Easter period. The so-called gambling State, N.S.W., wherein Sydney is the capital, at least pretends to preserve the dignity of this Day, though the horticulturalists are permitted to display their wares at the Royal Easter Show.

The secret composts, glass house or brush house type of constructions, failures to flower, special treatments to water, petty rivalry and different forms of feeding, all point to an eventual powerful orchid society through the continued survival of the few present day enthusiasts who are fanatically keen, though much too secretive regarding their limited cultural successes. The resultant intrigue is no doubt natural because of South Australia's secret weapon range and the need for remembering a former slogan "the enemy listens". Oddly enough, the current picture being shown was

Bob Hope in "My Favourite Spy", which should never have been permitted entry into South Australia.

Adelaide depends on the River Murray for much of its water supply for industrial and domestic uses. The irrigation methods employed in N.S.W. areas cause unwanted salts from feeding programmes to re-enter the Murray as it meanders over the border between the two States. It is this factor that plays so much havoc with the plants more than anything else. Thus to hoodwink, as much as possible, growers erect tanks to collect rainwater, *BUT there are no downpipes from any part of their homes to permit water to fill the tanks.* The metropolitan rainfall for this year was about one inch between Christmas and Easter. The full tanks suggest a form of furtive water treatment that is on the secret list.

I perceived that my brother and sister cymbidiums were nearly all grown inside glass houses with roofs that were much too low for ventilation. In nearly all collections their leaves were burnt from the tip of the leaf to a length of about six to ten inches. This was considered to be the "natural" result of the hot summer conditions accompanied by a searing north wind. Only one collection was comparatively free of bulb shrivel, and strangely enough this adverse condition of leaf burn was considered *natural because almost every collection was in the same category.*

Nearly all spikes were present, if any, on the bulb that was made during last year. No thought seemed to be given to the feeding of the plants to promote the rapid growth of this year's lead to produce a better bloom than the one from the "swinger".

A few days in this most hospitable city convinced me that Sydney growing methods would prevail if these methods were given a chance. Growers would have to change ninety per cent of their present ideas and open their eyes to observe that *all* the methods adopted by Sydney growers are being practised by Adelaide growers, but each individual grower is using a different ten per cent of what is considered good culture by the accepted standards.

One grower has erected a large brush house. I call it a bush house. My relatives call it Paradise. It is an area completely enclosed on all *four* sides but *open* on the roof and, though covered much too thickly with brush, it is in

this area that cymbidiums resembled those grown in Sydney.

There were no burnt leaf tips and the pots were placed on benches about six inches from the ground. The overhead sprays were turned on at night during the summer months. They were *not* used during the day. In most other collections the plants were "misted" overhead at least four times each day during the hot weather. I am afraid that my relatives were literally "burned at the stake"—not from the hot inside temperature, but from the unnecessary application of water over the plants during the hottest part of the day.

This one establishment, although clearly not one where expense had been spared, was regarded as one that produced plants but not enough blooms. The reason was obvious—the brush on the top of the house was much too heavy. It seemed as though the owner was expecting one of the atomic rockets to try to re-enter the earth's atmosphere and destroy his collection.

If only every other enthusiast would grow us in these proved local conditions then what a reward would be reaped. There would be no more burnt tips, long spindly growths, shrivelled bulbs and an occasional spike on last year's bulb. All the Adelaide reasons for glass house culture — no humidity, the north wind and other forms of argument — should be nonexistent, because here were cymbidiums very well grown in the Adelaide area, and though they are reputed not to produce flower spikes it is because of not enough sunlight penetrating the heavy brush on the roof.

Attempts to compromise have been made by various growers. Four posts have been thrust into the ground, wire meshing has been tied to these posts and then covered with brush. The plants are in pots on benches erected some three feet from the ground. Because they are scorched and dried out by any wind that happens to blow, seems to have proved that bush house conditions are not suitable to Adelaide.

As a matter of fact, this form of culture proves that cymbidiums are immune to man-made slaughter, though I wonder if man could exist in the same conditions that we in these same environments are expected to flourish?

We would much prefer a domain with four sides enclosed with a fibro or brick-like material, with adequate ventilators up to bench height, and then with glass in glazing bars continued to a seven feet high roof that is then covered with wire netting to support brush

that permits fifty per cent of sunlight. The tip or leaf burn would disappear if no water is applied *over* the plants between the morning watering programme and the evening damping down. A pot that is thoroughly wet to commence the day should not need any more water until evening.

Temperatures inside glass houses for other genera can be reduced by the application of a shade, which must be able to be removed, consisting of zinc sheets (which is now being tried), lattice laths spaced an inch or so apart, or roller blinds of some kind or other. Any shading should be placed at least twelve inches above the roof and be able to be removed for winter culture.

Nearly all Adelaide growers are proud of their vandas, and rightly so. These plants revel in the hot steamy conditions which my family hates. Phalaenopses and cypripediums also are produced in good condition where it is obvious that care has been taken.

The courage with which growers try to grow a propagation certainly belies this non-gambling, no lottery State. It is a gamble that their little "bits and pieces" survive and grow. Unlike the Eastern States, most growers attempt the impossible, with many trying to successfully cultivate about ten different genera in the one "furnace". Naturally enough, all "hell" is let loose. Some exist, some grow, but alas my poor relatives look very unhappy as though pleading to their owners for some good solid feeding programme and some fresh air, whether from the north wind or not.

These enthusiastic growers are caught up in an intrigue that is always prevalent when the "circle of friendship" is a small one, and fully comparable with Sydney in the 1940's. The rapid spread of orchid enthusiasts has not yet reached Adelaide—but it will. Nothing can stop it—once commonsense prevails and their intriguing ideas of cymbidium culture are exposed as mostly mythical and in common with a Richardson report.

Culturally speaking,

The Editor's Pauwelsii.

• O.S.N.S.W. Winter Orchid Festival will be held in Larke Hoskins Pty. Ltd., Austin Car Showroom, 207 William St., City, on Thursday, June 25th, from 11 a.m. to 9 p.m., and Friday, 26th, from 9 a.m. to 9.30 p.m. Admission is free and with special exhibits by Mr. Lou Sasso, Frank Slattery's Nursery and Dos Pueblos Orchid Co., the show should be the finest yet presented.

Miscellaneous Orchids for Pleasure

E. F. MOFFATT

PART I.

• So you want to grow exotic orchids! This desire is being expressed quite frequently in the metropolitan area of Sydney. Cymbidium growers are reacting to the challenge that they cannot be considered orchid enthusiasts in the true sense. Whilst the charm of "Sydney's Own" is still as strong as ever, the challenge to attempt something more difficult and something new is natural to all and the urge should not be denied.

Whether the ultimate blooming of a beautiful flower, or the solution of problems of growth alone, constitutes the main interest, is a matter of personal make-up, but it is certain that much of the philosophy of Life is to be encountered in the growing of a collection of miscellaneous genera. Under perfect conditions there are sufficient trials and tribulations to make for some strengthening of character. When an attempt is made to grow a majority of the popular genera in one glass house, it is certain that all the powers with which the human mind is endowed will be called into action.

The possession of an unlimited purse, whilst helpful, is thus not to be considered the main essential for successful achievement. More valuable is an enquiring mind braced with scientific thinking and an aptitude for perseverance in the face of obstacles and failures. To flower one good spray of an odontoglossum will compensate for all the disappointments.

In the past, the beginner has been encouraged to start with a bush house, that is, a timber frame covered with dried bush or laths. All that can be said in favour of this type of establishment is that it is an initial ramble in the foothills. Soon its unsatisfactory features become evident and these will force the enlightened owner to provide a structure which will permit the following elementary controls. (1) The supply of water; (2) A buffer to harmful winds; (3) Protection for the blooms.

Such a house can be left open on the favourable side. In Sydney it is the north-east. The other sides and the roof should be covered by using glazing bars and horticultural glass. It would not matter if one side was a wall or fence as the more varied the degree of light and moisture the easier it is to establish a variety of plants in a suitable environment. Be

warned, however, to provide two essentials at the beginning. (1) Sturdy uprights and roof supports, and (2) half as much room again as you think you will require. The roof beams should be strong enough not only to support your own weight, but also the extra weight of a multitude of pots and rafts for plants which will do better in a hanging position.

Space will not permit, nor is it the intention of this article, to mention all the essentials required in the building of such a house. Personal ingenuity and expert advice can provide helpful details. I must push on and give consideration to what you should try to grow.

It would be wrong for anyone to be didactic regarding types to grow and their culture, as all backyards provide slight variations in conditions and these differences become considerable when a wider geographic area has to be catered for. Consequently, I can only offer suggestions and culture notes gleaned from experience in my own environment in Sydney.

In order to help make the notes useful to those living further afield, I feel that some details of Sydney's geography and meteorological history should be supplied. The city with its extensive suburbs is situated on the sea coast in latitude 34 degrees S. with an altitude of only a few hundred feet. The annual rainfall gives an average of forty-eight inches and the domestic water supply is soft and quite suitable for orchids. The average monthly temperatures are: January, 72 degrees; February, 72 degrees; March, 70 degrees; April, 61 degrees; May, 59 degrees; June, 55 degrees; July, 53 degrees; August, 55 degrees; September, 59 degrees; October, 64 degrees; November, 67 degrees; December, 65 degrees.

The average daily variation is 14 degrees, but on any day this range of temperature could be 30 degrees. Each summer a few days are likely to be up to 105 degrees and in winter light frosts occur when many mornings are around the 40 degrees mark on the Fahrenheit scale. Prevailing winds in summer and autumn are from the north east. Coming from the sea they are moisture laden and excellent for the growth of exotics. In winter the winds are from the south east and south west. The first provides cold wet conditions and the other very cold and dry. In late spring and early summer warm dry westerlies are felt. A

summary would indicate that for at least five months of the year conditions are a little inferior to those in places favoured by Nature for the growing of orchids. In this period most of the exotics will thrive around Sydney in the open glass house. The severity of winter, however, makes survival of some genera too hazardous. Viewing the year as a whole there is, however, much that is similar to the annual conditions which prevail in the Hills Districts of Eastern India and Burma. With this information the beginner can start his collection by selecting:

(1) Hybrids. Such as cattleyas and laelio cattleyas, which make their growth during summer to flower in late summer and autumn,

and then rest and survive the winter without artificial heat.

(2) Species. Popular types collected from Sikkim, Khasi Hills and the Shan States of Burma, and primary hybrids made from these species.

Bearing the foregoing in mind, the following selection is suggested. Experience has shown that all of them, and probably some not listed, can be grown satisfactorily in a cold glass house in Sydney. There is a sufficient variety of most genera to keep the grower on his toes; interest will be maintained by a succession of flowers. A few native orchids of Australia have been included to give added interest.

NORMAL FLOWERING PERIOD IN SYDNEY	NAME OF PLANT		CODE
January/February	Rhyncostylis	retusa	1 A 3
	Aerides	Fieldingii	1 A 3
	Aerides	odoratum	1 A 3
	Vanda	coerulea	1 A 4
	Dendrobium	chrysanthum	1 B 4
March/April	Cattleya	Loddigesii and var. 'Harris- oniae'	1 C 2
	Cattleya	Bowringiana	1 B 2
	Cattleya	Hybrids which flower in this period	
	Cypripedium	Charlesworthii	1 C 1
	Odontoglossum	grande	1 C 2
	Oncidium	varicosum and its var. Rog- ersii	3 B 3
	Zygopetalum	Mackayi	1 C 1
	Laelia	anceps	1 B 2
	Cypripedium	insigne and its many varieties	1 C 1
	Cypripedium	Fairieianum	1 C 1
May/June/July/August (Winter Months)	Phais	Tankervilliae	1 C 1
	Phais	Wallichii	1 C 1
	Dendrobium	Kingianum	1 C 2
	Dendrobium	speciosum	1 C 2
	Coelogyne	cristata	2 B 4
	Vanda	tricolor	1 A 3
	Lycaste	Skinneri	1 C 1
	Lycaste	cruenta	1 C 1
	Dendrobium	nobile and its many varieties and hybrids	1 B 2
	Dendrobium	thyrsiflorum	1 B 2
September/October	Dendrobium	densiflorum	1 B 2
	Dendrobium	Farmeri	1 B 2
	Dendrobium	Pierardii	1 B 2
	Dendrobium	chrysotoxum	1 B 2
	Cypripedium	hirsutissimum	1 C 1
	Stanhopea	tigrina	2 B 3
	Stanhopea	grandiflora	2 B 3
	Thunia	Marshalliana	1 C 2
November/December			

It is not possible in this article to give lengthy notes regarding culture of the plants listed, however, some help can be offered by use of a code. Also, it must be remembered that in many cases each of the sections contain al-

ternatives that can be used quite satisfactorily. I like to suspend from the rafters many of the dendrobiums, and I have a preference for pots as they are easier to move and transport.

Section 1	Code No.	Details.
Type of Container	1	Pot. Earthenware or cement.
	2	Wooden raft or wire basket.
	3	Log of treefern or totem pole in a pot.
Section 2		
Potting Material	A	Inert material such as earthenware crock, charcoal, etc.
	B	Fibre. Osmunda or Todea.
	C	Leaf mould, tan bark and sand.
Section 3		
Situation	1	Bench in shade.
	2	Bench in warm area.
	3	Hanging in a warm section.
	4	Hanging in shady section.

Watering will depend on the requirements of individual plants and atmospheric variations. In general, root growth is the factor which decides whether heavy daily watering should be applied. Most orchids, particularly those which have a pseudo-bulb, have a period of rest after flowering. This period must be respected otherwise dormant growth eyes and roots will be rotted. Watering should be just sufficient to keep the pseudo-bulb from shrivelling and it should be done in the morning. I am rather concerned with the watering problem as my house is without direct sun from just after mid-day to very late afternoon and, in spite of knowing better, I still find myself too ready to use the hose. Most of my setbacks and losses can be attributed to injudicious watering. Wet soggy compost will cause rot in the plant. A danger period is very noticeable in late summer when humidity is high and again on cold wet days in winter. Be particularly careful when new growths are in the pre-bulb stage of growth. Water lodges deeply in these tender leads and the whole plant can be lost before any damage is apparent. *Zygopetalum Mackayi* and *Odontoglossum grande* at this stage of growth, and also *cyripediums* expected to flower, are best watered by dipping the pot in a bucket of water.

Light intensity is a factor which must be discussed in order to ensure satisfactory flowering. As a general rule, terrestrials require a more shady position than epiphytes. The leaves of the plants are very helpful and are usually sufficient guide to those who cannot be bothered with the details of light measurement. Thin

papery leaves require shade, whilst thick leathery leaves can take, and usually must have, a high degree of broken sunlight. Nice green foliage makes a handsome looking plant, but can be gained often at the expense of flowers. You must endeavour to find a position in the house which will permit as much light as possible without the leaves being scorched.

Present day growers are almost unanimous that controlled feeding is beneficial for orchids. It is essential for epiphytes growing in inert materials. This question and that of suitable foliage plants to set off your orchids will be dealt with in the next issue by a continuation of this article. The central theme will be woven around an amateur's attempt to grow all the popular heat loving orchids in a single glass house.

—31 Penshurst Ave., Penshurst, N.S.W.

• *WESTERN SUBURBS ORCHID SOCIETY*:—This Society will hold its 1959 Winter Show on the 27th June; the Spring Show will be held on the 25th and 26th September.

Both Shows will be held in the Soldiers' Memorial Hall, corner of Major Bay Road and Davidson Avenue, Central Concord.

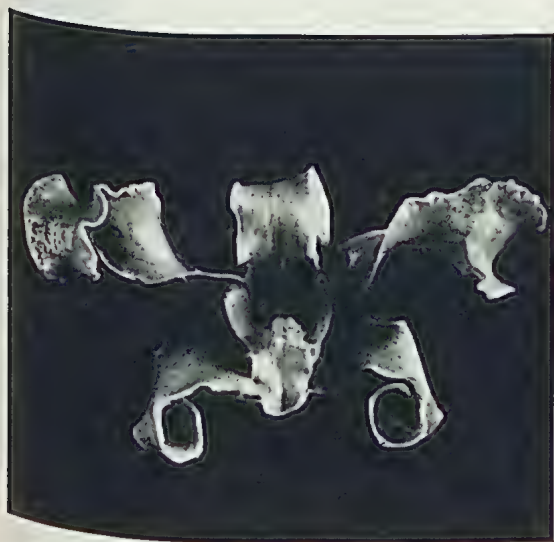
At the 1958 Spring Show, held on Friday and Saturday, the 26th and 27th September, the Grand Champion was Balkis 'Luath' (Mr. C. W. Bushell, Jr.) and the Reserve Champion Dorchester 'Jeanette' (Mr. Fleming).

The Douglas Cup for the Best *Cymbidium* Exhibited by a Member, inaugurated in 1952, was won outright by Mr. C. W. Bushell, Jr., the winner in 1955, 1957 and 1958.



COELOGYNE CRISTATA

A New Zealand grower, Mrs. F. Thaxter of Panmure, Auckland, grew this plant. The specimen photographed would enhance any orchid show throughout the world.



DENDROBIUM CLAIRE NISHIMURA
(Hula Girl x 442nd Infantry)

As with Dendrobium Amy this dark red bloom is nearly 4" in width, with exceptional spikes that are numerous and very long, falling into arching sprays of flowers. They are ideal for cut flowers.



DENDROBIUM AMY (Undulatum
x Hula Girl)

Very fascinating "antelope" type orchid; the twisted petals stand up like antelope horns. A very dark red bloom that has exceptional texture and lasting qualities. The complete spray carried thirty blooms. Photo by F. Moulen.



ODONTOGLOSSUM PERRYANUM
(*O. Camilla* x *O. Toreador*)

A brilliant red orchid with near perfect white markings shows the modern trend in odontoglossums. The four photos on this page enables one to compare the different characteristics of this family.
Photo by F. Moulen.



ODONTIODA MARGIA
(*Oda. Argia* x *Oda. Geisha*)

This dark red bloom has derived its colour from the *Cochlioda* breeding and although it has lost some size it has near perfection in the pattern of white markings. Photo by F. Moulen.



ODONTONIA SALAM (*Odna. Lulli* x *O. Rembrandt*)

Notice the miltonia lip that has been produced by crossing a miltonia with an odontoglossum. A French hybrid; the colour being mushroom pink.
Photo by F. Moulen.



VUYLSTEKEARA ESTELLE JEWEL

A trigeneric hybrid containing *Oda. Aspasia* x *Milt. Wm. Pitt.* A bright red bloom with white markings, but, as you will notice, does not have the rounded shape of an odontoglossum. Photo by F. Moulen.

Composts

A Talk Delivered to The Queensland
Orchid Society by Mr. G. L. Piper

• We have all seen how an orchid living in its natural habitat receives its supply of nutrients. The root system is spread over a large area and is supplied with humus by the decay of leaves and bark. This supply is often assisted by various mosses, fungi, dust, bird and insect droppings.

Some orchids prefer a particular tree. *Dendrobium falcatostrum* and *canaliculatum* are good examples as they favour Antarctic Beech and a small-leaved tea-tree respectively.

Other types grow in soil or on rocks. *Dend. Kingianum* is found clinging to rocks and in pockets of humus about rocks exposed to many hours of sunlight and abundant air circulation. While at the other extreme we find *Sarcochilus fitzgeraldii* growing on rocks often permanently moist and receiving only a short period of sunshine when the sun is directly over a narrow gorge.

After we learn of the wide range of conditions orchids grow under in nature we try to grow all of them in a suburban allotment and often all in the one plant house.

Because we want to have as many orchids as it is possible to cram into the house, the root systems have to be reduced in area. This is where the flower-pot helps the grower, but certainly not the plant, for a plant which has covered a large area with its roots now gets squeezed into a small space and buried with composts of various types. The compost cuts off most of the air circulation the roots once received.

Seldom do you find an orchid growing in nature with any dead roots, but we all know what we see when re-potting a plant which has been in a pot for some time.

Deciding on a pot for the orchid we must give it something to hold on to. This is where a wide variety of materials can be used. Some use fern fibres of various types and texture, while others use tree bark in several grades. For ground loving types a mixture of sand and humus serves well. These are commonly used composts, but some growing conditions require more open mixtures such as burnt earth and charcoal.

A friend of mine who has four types of orchids—Cattleyas, Vandas, *Dendrobiums* and *Cymbidiums*—grows them all in coral and

fowl manure. If he thinks they aren't growing well he gives them a half cup of superphosphate per pot. After he has gone to work his wife hoses it off the plant. As this happens about once a fortnight the plants get probably just the right amount of nourishment. His plants always look well and they certainly flower well. *Dend. Phalaenopsis* carry twelve to seventeen buds per spray and Blc. Heather Queen has never had less than three flowers per stem and four is quite common.

Due to a reduced feeding space the plants in a collection have to get regular supplies of nutrients from organic or inorganic sources. These are necessary to keep it in good health, increase its size and ensure flower production.

There are many complete fertilisers on the market which are completely soluble. This does not leave any excess salts in the compost or cause it to break down as rapidly as organic fertilisers.

Animal manures cause rapid collapse of composts and can cause damage or death to a plant by carrying harmful fungi and bacterial diseases.

Another organic fertiliser is blood and bone. These can generally be used with greater safety than the previous forms as it has not made contact with the soil.

It is not possible to produce a standard compost for growers because of the wide range of factors involved. However, the main thing to remember is "Has the plant adequate drainage?" If it has you have complied with the most important thing in orchid culture. Usually the drainage crocks or stones occupy one-quarter to one-third of the pot.

Always remember that more plants are killed by an over-wet compost than by a compost kept a little on the dry side.

• Where a plant is submitted for an award or prize the onus of proving that it has not been artificially manipulated is on the exhibitor and a decision of the Registrar in that regard is final and binding and it follows that if the plant has been artificially manipulated it is not eligible for consideration for an award or prize of the Society. (By-Law 15 (d) 1) O.S.N.S.W. (Inc.) Ltd. 17/3/1959.

Development in Cymbidium Culture

YORK MEREDITH

• Visitors to our nursery often comment on the healthy appearance and the vigorous growth of our plants. The cultural practice which gives us this result was the subject of a recent lecture held at the St. George Orchid Society.

In recent years research has been done by overseas universities into container grown plant culture techniques, particularly in regard to compost mixture, watering, fertilising and disease control. The principles recommended by these bodies have generally not been adopted by cymbidium growers, although these new practices are widely used by nurserymen. Cymbidium growers must realise that the plants they grow are not especially different from any other plant being grown in containers, and therefore the general principles could be followed in the cultural technique.

In discussing these systems we should first examine our composts. Cymbidiums have been grown for many years throughout Australia in a great diversity of composts. These have been made up from leaves, tan bark, coarse sand and sometimes animal manures have been added. The net result has been that cymbidiums have grown—some very well, some fairly well and some very poorly, but practically everybody has been able to achieve reasonable flowering under the systems.

At first we should examine the functions of a compost. It is there primarily to support the plant. Secondly, it should hold sufficient moisture for the plant's requirements in between waterings. It should permit adequate aeration of the roots at all times and be a vehicle for the essential nutrients for the plant's active development.

In selecting suitable materials for the compost we consider the following points: The materials we are going to use should be readily available and free from fluctuation in price. All materials should be uniform in nature, i.e., excessively coarse or fine particles (clay and humus particles) should not be used. Shrinkage in the compost should be negligible, i.e., the materials should not break down into very fine humus particles. The mixture should be easy to prepare. Fertility of the ingredients should be low; they should not contain nutrients such as are in animal manures. With these we introduce an unknown factor into the culture, as

the nutrient level of the materials can only be determined by analysis and we are not sure whether or not toxic materials are present in these manures. The materials should be inert and should not yield salts. The compost should resist the excessive leaching of nutrients. (Peat moss has been found to hold certain salts by base exchange of ions.)

Materials suitable for use in potting mixtures which meet with the above requirements are German peat moss, fine sand .05 to .5 mm., rice hulls, Perlite, wood shavings, sawdust, redwood wool, redwood chips. We recommend the use of very fine sand in the mixture as coarse sand permits excessive leaching of nutrients.

We have been using a mixture of a little over half peat moss, a third of rice hulls and the balance fine sand. However, the mixture may be modified to suit the individual requirements and the availability of materials. Where rice hulls are not available, Perlite, wood shavings or sawdust could be substituted. No attempt should be made to add leaf mould, tan bark or animal manure to this mixture as these do not fulfill the requirements specified above.

It is necessary to add fertilisers to the mixture. The main nutriment required are nitrogen, phosphorus, potassium, calcium, magnesium and iron. Sources of these which can be recommended and are available in Australia are as follows:

For nitrogen—blood meal, hoof and horn meal, urea, calcium nitrate, ammonium nitrate.

For phosphate—superphosphate, mono-ammonium phosphate and di-ammonium phosphate.

For potassium—potassium sulphate, nitrate or chloride.

Magnesium and calcium are available from magnesite (dolomite).

Iron should need to be added in the chelated form as the phosphates in acid soil render the iron unavailable to the plants.

In mixing the compost it is recommended that this should be done on a clean cement floor. The mixture should be treated with Vapam, steam, methyl bromide or chloropiclum. Steam is by far the most effective agent for sterilisation as the compost controls all soil pests and can be used immediately after cooling down. However, the most convenient for

the small grower is Vapam. This chemical can be watered on to the compost and left exposed to the air, whereas methyl bromide and chloropictum will need to be covered with polythene sheets.

The reason for sterilising soil is to control soil-borne pathogenes which cause black rot, shoot rotting and damping off. The pathogenes include Rhizoctonia, Phytophthora (Black Rot) and Pythium (Shoot rotting).

Greater cleanliness in the potting process is essential. Potting benches, tools and wheel barrows should all be cleansed and treated with formalin solution prior to use. Hands and fingernails should be cleaned before handling sterilised soils. If we want to ensure the safety of our valuable plants we cannot afford to introduce pathogenes through negligence.

Plants that have not been grown in pathogen-free culture previously should be cleaned, all dead tissues removed and the plants immersed in a solution of T.M.T.D. at the manufacturer's recommended strength. The plants should be allowed to dry out for some time in a clean position prior to repotting.

The practices of watering and fertilising follow closely. The water is a vehicle for the nutrients and has to be available in abundant quantity for the plants to absorb their requirements. Water should be applied in cycles. The practice of daily watering should not be continued as this will add to the salinity problem, which will be dealt with later in this article.

At the Company we use water from a dam which has an extremely low salt content. Where dam water is used it is recommended that an analysis be made to check the salt content. When it is found that the salt content is high, deionisation would need to be installed or far greater quantities of water would need to be applied than is recommended below. The Sydney water supply water is relatively pure, but in South Australia and Western Australia salt contents are very high and growers will need a far greater quantity of water to be applied to their plants.

The application of water should be made two to three times during a week, depending on climatic conditions. One or two light applications of half an inch to three-quarters of an inch lasting one hour with a rain spray type sprinkler should be made, and followed by a heavy application of two inches lasting three hours. This watering period should be extended over four days. The next three days no water should be applied and this practice is to

be followed during winter and summer.

Fertilising can follow two courses. The fertiliser may be applied in a dry form once a month or in a liquid form each week. The reason for this is because of the nitrogen being used. Where organic nitrogen as in blood or hoof and horn meal is used, this fertiliser may be added once a month at a rate of four pounds per hundred square feet.

Liquid fertiliser on the other hand has to be applied each week at the rate of two and a half pounds per one hundred gallons of water at the ratio 19-28-14. The liquid fertiliser should be applied during or after the light watering mentioned above and the fertilising should be followed by the heavy application of water two or three days later.

Fertilising should only take place while the soil temperature is above fifty-five degrees, otherwise the plants will suffer from salinity when the soil becomes warmer again.

Cultural problems which occur with the growing of plants can be divided into three classifications: salinity, insects and fungus diseases.

Salinity is a major cause of damage to cymbidium plants. Excessive chemical or organic feeding results in an oversupply of ions, which will cause burning of the roots and the tips of the leaves. Poor drainage will also result in an excess of salts when fertilisers are applied, due to the salts not being washed through the soil. Drainage should be provided by good open structure in the compost. Crocks are unnecessary. We do not make a practice of using any crocks in our nursery.

Incorrect irrigation practice is one of the worst causes of salinity. Constant light watering so frequently practised by growers during the summer months leaves the majority of the unused salts in the compost. A toxic condition is soon reached and the plants cease to grow vigorously.

Flower pots are another source of salinity. Pots which have been used previously contain high quantities of salts. These are sometimes noticed on the outside of terra cotta pots. Where pots are being re-used it is necessary to soak the pots at least overnight in a large volume of water so that the salts can be dissolved and washed out of the pots.

The salinity in the pots is caused by the continuous evaporation. The water usually contains small quantities of salts which are held in the terra cotta. When the roots of the plants come in contact with the terra cotta wall of the

pot, burning takes place on the root area, particularly when the compost dries out. If this condition is accelerated, burning of the tips of the leaves will occur. One way of overcoming this problem would be to use plastic pots. We have been experimenting with these and have had very satisfactory results up to date. They will most certainly be useful for epiphytic orchids such as vandas and phalaenopses, as these are especially subject to the salinity problem. Symptoms of salinity in cymbidiums are black tips of the leaves, necrotic condition on the new roots, the hanging of leaves, defoliation or the formation of back bulbs.

Insect control is a constant problem with cymbidium plants. Unfortunately, the plants surrounding us in our garden are hosts for insects which attack cymbidiums. For this reason we spray our plants each week. During the last year a new spray has come on the Australian market for the control of red spider. It is known as Trithion, an organic phosphorus derivative which has ovacidal properties. It kills the eggs of the red spider, whereas Malathion and Folidol kill only the adults. Trithion also gives control of aphids and scale insects. We have found, however, that Trithion is phytotoxic with *Anthurium andreanum* and will cause serious defoliation. We also use D.D.T. mixtures in our spray programme. Outspan D.D.T. has been found more satisfactory than the Wellspray D.D.T. when we mixed the three sprays Trithion, D.D.T. and Cenab together, as it has caused necrotic spots on the leaves due to the excessive amounts of wetting agents.

Air borne fungus diseases control is largely achieved by the use of Cenab mixed with the above mentioned ingredients.

Freedom of air movement through the houses greatly reduces these diseases. However, constant weekly spraying should eliminate most of the problems. The soil borne diseases which cause black rot, damping off and shoot rotting have been dealt with in the soil sterilisation paragraph above.

The methods in use at our nursery have proved to be extremely effective in the culture of cymbidiums under commercial scale, and we feel sure that many growers could benefit by adopting them.

—Dos Pueblos Orchid Co., N.S.W.

• TO THE EDITOR.

Dear Sir,

In the article "Cymbidium Comparisons" by H. Jenkins in the March issue of the *Australian Orchid Review*, mention was made of the popularity of Cym. York 'Lady Slim' in Australia as against its obscurity in America. That York was overshadowed in America, could be one explanation; but we could substitute the word "Cymbidium" for the word "Prophet" in the old adage of the "Prophet without honour in his own country", as an alternative answer. That, of course, could apply in more ways than one, as we have extreme difficulty in gaining recognition for some of our productions in Australia. That is not disparagement of Cym. York 'Lady Slim', which is a very fine cymbidium. But whether a propagation of an equal Australian cymbidium could be sold for as high a figure as York commands is very doubtful. *Before getting that price a more difficult task would be to obtain sufficient recognition to even put it in the front rank.*

The law of supply and demand naturally inflates values, so that an extortionate figure is quoted at times for what is intrinsically a poor purchase from the point of view of flower return. Cym. York as a yellow, would be difficult to sell even in Melbourne (let alone New York), as a florist proposition. But usually the buyer of a high-priced cymbidium, when he is one of many, is not concerned with producing flowers—he is more concerned that the purchase double or triple itself as quickly as possible to supply the continuing demand. This justifies the inflated price of an Award of Merit cymbidium from a propagator's point of view, but hardly that of the men on the sidelines. If anything, it is a residual legacy from the bad old days which ended five or six years ago. As a breeding proposition it is probably as useless as thousands of other equally beautiful cymbidiums, so where is its value? Not in flowers, not in breeding, hardly as an investment! It may satisfy an ego, but never a cymbidium grower. Congratulations, Mr. Jenkins, on a nicely put together story, even if we cannot all agree with some of its "propaganda" section for American as against English bred cymbidiums. Both countries, also Australia, are playing a part in the development of the cymbidium, as witness Cym. Robin Redbreast seen at the last Melbourne Orchid Festival, and quite a number of others that have not yet come out of "smoke".—J. N. Rentoul.

• Copy for the next issue of this Review should be received by the Editor before July 11th, 1959.—H.J.L.

Orchid Culture in South Australia

WESLEY HARRIS

Members of our club are, I am sure, grateful to Miss Linley Thomas for her explanation last year of climatic differences—particularly in summer—between N.S.W. and our State, and it is likely that our culture of orchids will improve through a better appreciation of the subject.

A humid summer day is extremely rare here. We have clear atmosphere and we get many more hours of more brilliant sunshine than in any other State; humidity is, as a rule, extremely low both day and night.

Because of this fact, the I.C.I. has established salt pans here—it is realised that evaporation is rapid. Sea water at Port Adelaide has a specific gravity of 1028 (the Dead Sea and only one or two other places exceed this saline concentration).

I feel I have explained "how dry we are".

Our occasional searing northerlies burn cymbidium leaves in a bush house or cool glass if they get fresh air. The State's record temperature is 117.7 degrees F., and we have had ten days since Xmas with higher than 100 degrees.

I did notice one exception with little damage in a member's house which had glass east, north and west, fibro cement on south wall and brush roof.

The whole floor was twelve inches deep in hardwood sawdust. This member had successfully applied the missing link—humidity—and he blooms a good percentage of his plants.

Water from our mains will not compare favourably with that of Sydney—Melbourne, I understand, has distilled water, or at least quite close to it—whereas ours is highly alkaline and particularly so when River Murray water supplements our twenty-inch rainfall (Sydney forty-six inches).

I have used commercial quality phosphoric acid to reduce or neutralise this fault and am still hoping to improve matters.

It is understood that cymbidiums can utilise a lot of food when light is intense and we are following the N.S.W. practice of layering with animal manure in January, February and March.

A "flowering size plant" by N.S.W. standards—one green bulb and lead—has given us many headaches and has taken years to double in size, and I confess that this is due, in large measure, to a lack of knowledge of our own

climate, compared with that of the humid coastal belt in N.S.W., where growth and blooms are very close to perfection.

Sphagnum moss dies, perhaps because of our bad water, in ninety-nine per cent of my cases and with it a hundred per cent loss of cattleya and dendrobium roots, and I have had plants arrive from interstate in this condition—a wad had been wrapped around a bunch of roots and died and poisoned or drowned the lot.

In cymbidium compost or with vandas, angraecums, phalaenopses or cypripediums, it does not seem to affect root growth, whether the moss is alive or not.

Efforts in our warm glasshouses—where we have managed to keep up humidity—have been more rewarding and we find that if perforated zinc sheets are laid over the glass, with a space of several inches, then excessive heat is reduced.

One lady member had a "dribbler" hose attached from end to end of the ridge and kept the glass cooler by many degrees.

I saw Dr. Vote's x D. Phals. grown to perfection in his glass house—three-foot growths in two-inch pots — and similar growth with similar hybrids in Honolulu—both humid localities—and I endeavoured to grow mine in two-inch pots until I visited a nearby South Australian grower—by invitation—last January and I saw his x D. Phals. blooming to equal those above in hollow logs.

My plants in two-inch pots had deteriorated annually and they are now in hollow logs—osmunda—with a damp pocket or two of German peat and, at our Editor's suggestion, are in the bush house until March.

We have a healthy club and we hope to surmount some of our problems by discussions with others and between ourselves.

—17 Old Belair Road, Mitcham, S.A.

Where the Committee of the O.S.N.S.W. (Inc.) Ltd. wishes to confer life membership on a person who has rendered outstanding service to the Society, the period of service is now reduced from 15 years to 10 years. (By-law 3(c)).

The Care of, Watering and Conditions of Orchids

C. A. HILSDEN

• The subject matter of this article is of such a wide nature that full justice to details cannot be given, but a brief outline of the requirements will serve as a guide to the grower.

There are so many different genera of orchids, each requiring different culture and conditions, that the grower should acquire a little knowledge, which increases with experience, of the habitat and climate of the country of origin of the particular genus that he wishes to grow. This will indicate whether bush house or glass house treatment is desirable, also the prospects of successful culture of the desired genus in the given location.

Assuming, therefore, that a varied collection is desired, the most suitable positions in the plant house should be selected to suit each genus and to keep all the specimens of each genus grouped together. Arrange the plants as to their size so that a tall plant does not overshadow a smaller one. Where different treatment is required, as with *Cattleyas*, *Cypripediums*, *Phalaenopses*, *Dendrobiums*, etc., it is preferable to have a second plant house or a division of the main house, where the conditions of sunlight, heat and moisture can be controlled, together with cool to hot growing conditions.

Having decided on a certain compost mixture for each genus which, after a little experimentation and observation, gives the best results, then pot all the plants of the same genus uniformly in the same mixture so that the same treatment will suit each plant.

If the grower has hanging plants in his plant house, hang them so that the water does not drip on to other plants on the benches, as many young growths and flower shoots may be ruined by the drips lodging in them.

Cleanliness in the plant house is a further insurance to healthy plants. At, say, yearly periods the walls and benches should be cleaned down of any accumulated dirt and the materials used to conserve moisture on the benches replaced with new. During these operations each plant as it is moved may be examined, tidied up where necessary, and cleaned of any scale or insect pests that may be present.

Pots may need cleaning and indistinct labels renewed. Any plants needing repotting or dividing may then be dealt with or put aside for future attention.

If a plant has grown to the edge of the pot where the new growth or roots would overlap the side of the pot, or the compost has broken down, or a large plant is to be divided, the repotting should be done in early spring to gain the maximum growing period ahead.

Having made everything clean and the plants nicely arranged on the benches, it is easy to inspect the plants at short intervals during the year and deal with any pests that might appear in the early stages.

When it is noticed that a plant is not in a thriving condition and the cause is not obvious, try moving the plant to a different position or standing it on an inverted flower-pot, which often restores the health of the plant.

It is generally recognised that watering and a good ventilation of fresh air are important factors in the successful culture of orchids. No hard and fast rules can be laid down to suit all localities, as it is a matter for individual judgment, weather and local conditions. Rain water if available is much better than town water.

Naturally, during the growing season the plants require more water to stimulate growth than when dormant, also if the plants are in small pots. Here again, the different genera such as *Phalaenopses* and *Cypripediums* that require to be kept moist at all times, and the *Cattleya* and allied genera, that should be allowed to dry between waterings, need the judgment of the grower. Tuberous orchids such as *Calanthes*, *Thunias*, etc., do not need water during the winter resting period.

When watering, it is essential to water the plants thoroughly rather than just sprinkle around the top of the compost on frequent occasions. Plants that are hanging should be dipped in a bucket or tank until the compost is saturated. If in doubt about the dry appearance of the compost, yet the bulbs of the plant are nice and plump, do not hasten to water it.

If a plant is firmly potted in clean compost and the pot well crocked, the surplus water will pass through freely, but the loosely, badly potted plant retains the water too long and, through sourness, will not thrive. A very sound rule is never to water a plant in a falling temperature.

Spring and summer months are the main growing seasons when an abundance of water is

required. Autumn is the ripening or hardening period when less watering is required as the new growths are completing their growth in readiness for flowering. Winter is the resting period when watering is reduced to the minimum, short of allowing the bulbs to shrivel.

One is often asked if a plant that is growing out of season should be treated differently from the others of the same genus that are in a dormant state. The answer is that all the plants should be treated the same, providing the bulbs do not tend to shrivel. During the hot weather a light overhead spraying is beneficial, as it helps to create a moist, buoyant atmosphere, and hosing the floor and around the benches preserves the moisture.

A small concrete pool for dipping placed conveniently in the plant house helps to conserve the humidity.

Where practicable the plant house should be built running north to south, as this position gives a maximum and even distribution of sun and light throughout. It should be built away from any other structure or tall trees that would shade and darken it and allow for removable light shading during the hot summer months to prevent burning of the leaves.

Further protection from the westerly and south-westerly winds is necessary for the well being of the plants, as the gusty winds tend to dry up the atmospheric moisture of the house as well as disturbing the plants. If the house has a battened roof, it should have a good slope, and the battens fixed so that the water will run down to the eaves and not drip on to the plants.

If the plants are grown on benches, do not make the benches too wide, as the plants at the back are difficult to handle and may not receive their full share of attention or water. The benches may be up to three feet wide and up to two feet six inches high for ease of handling the plants.

Avoid overcrowding the benches, as when the plants are packed together it is more difficult to observe the presence of insect pests and scale in the early stage and to deal effectively with it.

Should it be noticed that the green root tips have been eaten off the presence of slugs or cockroaches can be suspected and immediate measures for their discovery and destruction should be taken, as they may cause a lot of damage in a short time.

It may be said that conditions are as important as composts. A sensible approach to both will bring better results; as, for example, the

warm, moist and shady conditions required by *Phalaenopsis* all the year round, would result in soft and sappy growth in *Cattleyas* that require maximum light and filtered sunshine.

Much more could be written about the conditions required for the various genera, such as *Miltonias*, *Odontoglossums*, *Vandas*, etc., each with different requirements, that it is not within the scope of the article to cover, but the main points dealt with will, I hope, be a general guide to successful results.

—Clayfield, Brisbane, Qld.

• A *dendrobium* seldom seen in Australia was exhibited at the January meeting of the Victorian Orchid Club. *Dendrobium Sanderae*, a native of the Philippines (surprisingly a cool-house orchid), growing in Melbourne in the unheated glass house of Mr. Gardiner, produces enormous heads of pure white flowers in January or February every year. The lip of the flower is white with purple lines in the throat and, coming at a time when there is little else in flower, it is doubly valuable.

What is surprising about a *dendrobium* that produces hundreds of white flowers the size of a large *D. nobile*, yet shaped like *D. Jamesianum*, is that it has gained so little recognition in this country. Another surprise is that it apparently failed to produce any worthwhile hybrids. It was first flowered and named in 1909, the flowers varying from an inch and a half to three inches across in the different varieties that have been flowered and used as parents. Crossed with *D. Dearei*, another similar white Philippine's *Dendrobium*, it produced a hybrid named Isabel Sander. (Fortunate Isabel, whose name will be commemorated in hybrids of many genera to eternity.) The only other cross made was with *infundibulum*, and named *Infunderae*.

The habit of growth of *Sanderae* is close-set pseudo-bulbs flowering in similar fashion to *nobile* with three or four to an umbel, each two to three-foot cane carrying anything up to twenty flowers. It is a very showy thing, and Mr. Gardiner's plant gained the judges' vote and the best species of any genera. Its appearance resembles *moschatum* as a plant, the growths retaining their leaves for some years over two-thirds of their height.—J. N. Rentoul.

• Interstate growers interested in the N.S.W. O.S. Winter Show should write to Mr. K. Lamont, 42 Lawley Crescent, Pymble, for a schedule.

Winter Culture in N.S.W.

H. J. LAWLER

• A comfortable rocking chair and a warm fire causes most orchid growers to relax during Sydney's winter period. It is not really cold as compared with our Southern States, nor is it to be compared with a European or an American winter. We have no snow or sleet and the thermometer rarely falls below forty degrees Fahrenheit. The cymbidiums flower and flourish in bush houses without any heat, and it is relatively simple to heat an average glass house to remain at sixty degrees during the coldest night for all other genera.

Most of the damage, caused by watering techniques, to the root systems of our plants is done during the so-called relaxing winter period. To my mind this period is the most important period of the year. It is the period that produces most of our cymbidium and cypripedium blooms and the period that makes us forget to water our plants just because text books tell us that it is a resting period. Get out of that restful rocking chair and let us have a look at our plants during winter.

CYMBIDIUMS

June is the month when preparation of compost is very important. Any plant that needs to be repotted can be quite safely potted on. If the compost is prepared at the commencement of this month the plant is not repotted in a new mixture that has not had time to become "workable". Plant foods take a few weeks to become active by being broken down enough for the roots to want to commence their search for provisions. If plants have to be broken or divided then leave them be until the end of July. Most green cymbidiums resent being divided and invariably bulb shrivel results. Do this job in July and there should be no shrivel.

Good tan bark has become very scarce in this part of the world. The substitute material—peat moss—is fast becoming the basis of our compost. Where tan bark can vary, according to its source of origin or tannery, peat moss does not. For some years now various growers have used peat moss with better results than tan bark. It is problematical which is best. Should your tan bark supply become non-existent, try a mixture of fifty per cent peat moss, thirty per cent oak shavings or perlite, ten per cent sand and ten per cent fowl or sheep manure. This mixture is then treated exactly

the same way as our basic compost that was printed in the June, 1958 A.O.R. All feeding each month and heavy watering is the same with either of the composts. I have seen both mixtures used in the one bush house with no difference in the results and, as the peat moss does not break down as quickly as tan bark, the plants do not have to be disturbed each second year unless they have outgrown their containers. However, various growers like to repot each year.

Our plants that were potted into our basic mixture last season should not have to be repotted this season unless the plants have to be moved into larger pots. *This does not mean to break the plants*; merely tip the plants out of their pots and shake away the loose compost, then place them into larger pots and gently add fresh compost. As these plants are our show bench "winners" for 1960, do the repotting as soon as possible after the 1st of July. Be ruthless if the plant is in spike. Cut it off as soon as it has opened so as to get the plant settled down for its necessary long undisturbed growing period. If you want to export the spike *don't* cut it until it has been open for at least ten days, preferably fourteen days. The flowers are not set and will be too soft for their long journey overseas.

Any compost, which should be moist when used, should not be permitted to dry out even after repotting. Keep it moist, though not wet, for about a week before commencing normal watering. If peat moss dries out the problem of getting it moist again is met. You will have to submerge each pot separately in a tub of water. This is practically impossible with a large collection.

Your flowering house should be in use for the early cymbidiums. It is not good practice to bring the plants into this house *before* the buds emerge from their sheaths. But it is *imperative* to place the plants in their flowering positions as soon as the buds are seen, but *before* the sun can see them. It is useless to protect the blooms from the sun once the blooms are ready to open.

Folidust must be used for insect prevention, not E605 or Folidol, once the buds are seen. Shirlan A.G. should be used every seven days, two teaspoons to one gallon of water, to pre-

vent spotting of blooms. This fungus preventative will save many beautiful flowers from being spotted. Once the spores are present they do not become visible for three or four days, hence the seven-day treatment.

CATTLEYAS

It is very important to group these plants into a dormant section and a growing section. Heated glass houses with a night temperature of sixty degrees will mean that blooms will still be obtained through the winter months if the plants have not yet completed their new growths. These plants must still be kept moist. The dormant section will need a thorough watering once a week if they are resting in this sixty degree night temperature. It is foolish to let any orchid shrivel before it is watered. The shrivelling business is all right for young female secretaries who are striving to make an impression, but not for orchids.

Look at your plants now that most of the growing period is finished. Is the new growth long and spindly? Not enough light—your conditions are too dark. These conditions, though, would suit cypripediums. Did the plants bloom as per expectation? Not enough light. Are the plants a lush green colour? Not enough light. They should be a yellowy green. Scrape some of the paint from the roof of your glass house to permit the weak winter sunlight to harden the plants.

With rare exceptions a cattleya will not flourish without heat, but should you have a cold glass house then water your plants once each two weeks and no feeding whatsoever until the new roots commence with the spring.

CYPRIPEDIUMS

These plants are much more contented if sixty degrees of temperature are used. With this heat any cypripediums can be repotted or separated. This heat permits new roots to commence their foraging for food much quicker than plants grown in a temperature of fifty-three degrees. The new growth grows much faster and naturally permits the plant to flower much earlier next year. Should you desire to delay the flowering for a particular show, then move the flowering plant to cooler conditions to prevent its natural floral expectancy.

Although not advised in various other orchid growing areas, the cypripediums in Sydney will take a topping of fowl or cow manure once the new roots start moving down into the pot. Sydney grown cypripediums until this last year or so were not comparable with those grown in Melbourne. Manure has equalised

the growth. Your plants which were potted in our basic compost of one-third of each of tan bark, peat moss and oak leaves, should be topped with about half an inch of manure which is then covered with fresh compost. The time to do this is as already explained, but remember all new root growth does not commence at the one time. You do not repot all your cypripediums at the one time, nor do you repot any miscellaneous orchid until the new roots are showing.

June is cypripedium time. The blooms predominate in the winter shows. Many importations will not "stand up" unless they are packed, before the flower is set, with cotton wool or tissue paper. Photos of blooms that are received in this country are very beautiful, but various Societies permit the use of artificial aids in the preparation of show blooms. The O.S. of N.S.W. judges disqualify a bloom of any genus that has been so-called manipulated. Whether our judges are correct and the others wrong does not matter. If you use cotton wool then don't forget to "shave" your plants. Even if you pack your blooms for transit don't use cotton wool. Your explanations are received à la taxation department. You are guilty—you have to prove your innocent intentions.

MILTONIAS

No orchid I know of grows as fast as do miltonias during the winter period. This cooler growing cycle causes most growers to use a hose sparingly. The pansy orchids require plenty of light, water and fortnightly feeding in sixty degrees of heat. Some spikes are already showing. It is wrong to keep miltonias on the dry side. A sure sign of dry conditions is the appearance of "water" spots on the leaves. These spots are caused by thrips and E605 must be used to clean them out. Moist conditions are not to the liking of most insects. Try to dry the plants' leaves by evening if you cannot keep your house at sixty degrees, and don't water overhead. If the temperature is sixty degrees then thoroughly water the plants about three times each week, even though it is winter time. New growths are well advanced and should not damp off. Never repot a miltonia in the winter. The root disturbance will be fatal. Wait until the new roots appear in November or December.

ODONTOGLOSSUMS

Treat as for miltonias except that various plants have different periods of growth. The plants do not all grow and flower at the one time. Hence, if new roots appear at the base

of your new growths, then repot if the plants need it. *Odontoglossums* are not really cool growing orchids. They just don't like being subjected to very hot summer conditions. BUT—they do need either acclimatised bush house conditions for the year or else glass house sixty degrees winter conditions. If a back bulb goes yellow and soft then make sure you cut it away from the rest of the plant and dust the cut with sulphur or stockholm tar. A rotten back bulb will infect the rest of your plant in a very short time.

Sydney glass houses are perhaps too "light" for successful culture of *odontoglossums*, but if some muslin is placed above this family, success will be yours. Too much shade has caused the death of more plants than enough. Experience has proved that this "plenty of shade" idea for the *odontoglossum* family is all wrong, for Sydney growers.

Leaves are like long, spindly eschalots, and the gradual extinction of the plant is because of not enough incentive to grow in dark dingy conditions. It is not our summer heat that causes the trouble but, as I have explained, the prison-like darkness that we have been impressed with. Wait until spring comes and try a few in between your *cymbidiums* in a bush house.

VANDAS

Green tips of vanda roots means that the plants are not dormant and still require water and feed. In our open composts and high temperatures these orchids require more water during the winter than is generally recognised. My vandas are grown with *phalaenopses* for room-mates and sixty-five degrees of heat is kept up to them. With these conditions the plants need watering three times a week. Their compost is very open and no roots inside the pots can be damaged because of too much water—possibly the reverse can happen; they could die from too little. It is wise not to water flowering plants overhead as the water remaining in the axil of their leaves can rot the new flower spike. Watch your aerial roots and water accordingly. No vandas should be grown in open bush house conditions during winter.

PHALAENOPSES

The increase in heat usually makes these plants commence to flower and once again water is needed in generous quantities. If you had no storage tank like a *cymbidium*, how then can you be sure a *phalaenopsis* plant is a camel? Heat your plants, but give them water. Enthusiasts who cannot provide at least sixty

degrees of heat should *not* grow *phalaenopses*. The plants will probably grow, or shall I say exist—for a time.

Plants need plenty of shade but not gloom. The only gloom in a glass house is that which is expressed when you have been caught manipulating your blooms. Dull listless leaves prove too much light has been given to the plants. Try some hessian or muslin above the plants to prevent a too much light condition.

DENDROBIUMS

Nobile or softwood varieties should be out in the *cymbidium* flowering house, protected from winter rains by being under glass. The plants should be returned to a heated glass house about six weeks before it is intended to show them. The blooms will open in time for September shows if this form of culture is practised. Too much water will make your flower nodes turn into aerial growths.

Hardwood varieties should be kept growing until you can see that no more new leaves are present. A gradual easing of their water supply should follow, and then hang the plants from a rafter to ensure that the new eyes cannot damp off as they commence to grow whilst you are busy with *cymbidium* repotting. A warm early spring day in August may cause the hose to come into play. This is the time that the eyes or new growths will quickly damp off. No water at all need be applied to the plants until the new growth is two or three inches in length.

SEEDLINGS

It is common practice now to move seedlings "on" even in winter time. Small pots do not need much compost. Seedlings do not require large pots nor do they require large root areas and plenty of compost.

It is false economy to let seedlings outgrow their pots. Move them on into larger or the same size pots, at least three times a year. The root ball need not be disturbed because in three or four months the compost, whether for *cymbidiums*, *cattleyas* or *cyripediums*, would not have "had it". The all too few roots of a seedling seem to revel in a change of environment which is so unlike an adult plant.

• The requirement of ownership for six months before a plant is eligible for an award or prize does not apply to plants in a District, Affiliated Society, Trade or Non-Competitive exhibit where an award is for a gold, silver or bronze medal or Certificate of Commendation. (By-law 15 (d) 6) O.S.N.S.W. (Inc.) Ltd., 17/3/1959.

• **ANNUAL SHOWS.**

Ku-ring-gai Orchid Society.—14th and 15th August. Killara Memorial Hall, Marion St., Killara.

Warringah Orchid Society.—27th and 28th August.

North Shore Orchid Society.—3rd, 4th and 5th September. Chatswood Town Hall.

St. George Orchid Society.—10th, 11th and 12th September. Legacy House, Ormonde Parade, Hurstville.

Belmont-Swansea District Orchid Society.—11th and 12th September. R.S.L., Swansea.

Illawarra District Orchid Society.—11th and 12th September. Pioneer Hall, Wollongong.

Newcastle Orchid Society.—16th, 17th, 18th and 19th September. Supper Room, City Hall, King Street, Newcastle.

Parramatta and District Orchid Society.—16th, 17th, 18th and 19th September.

Gosford and District Orchid Society.—17th, 18th and 19th September. Masonic Hall, Gosford.

South Coast Orchid Society.—17th, 18th and 19th September. Community Hall, Princes Highway, Corrimal.

Manly Orchid Circle.—18th and 19th September.

East Hills and District Horticultural and Orchid Society.—19th September. St. Christophers School Hall, Tower Street, Panania.

Shoalhaven Orchid Society.—20th and 21st September. R.S.L. Hall, Junction St., Nowra.

Commonwealth Bank Orchid Society.—22nd September. Commonwealth Bank, Sydney.

Eastwood and District Orchid Society.—25th and 26th September. Masonic Hall, Rowe St., Eastwood.

Western Suburbs Orchid Society.—25th and 26th September. Soldiers' Memorial Hall, Concord.

Sutherland Shire Orchid Society.—26th September. Masonic Hall, Cronulla.

Sydney Orchid Society.—26th September. R.S.L. Hall, Anglo Road, Campsie.

Yagoona and District Orchid Society.—26th September. Public School, Yagoona.

Maitland Orchid Society.—2nd and 3rd October. Maitland Town Hall.

Camden Orchid Society.—3rd October. R.S.L. Hall, Oxley Street, Camden.

Blue Mountains and District Orchid Society.—9th and 10th October. Citizens' Hall, Western Highway, Warrimoo.

Mosman Home Gardeners' Association.—4th and 5th September. Mosman Town Hall.

O.S. N.S.W. FESTIVAL.—15th, 16th, 17th and 18th September. Sydney Town Hall.

• **WINTER SHOWS.**

O.S. N.S.W. Ltd.—25th and 26th June, 1959. Larke Hoskins Pty. Ltd. Showroom, 207 William Street, Sydney.

Western Suburbs Orchid Society.—27th June. Soldiers' Memorial Hall, cnr. Davidson Avenue and Majors Bay Road, Concord.

North Shore Orchid Society.—3rd and 4th July. Chatswood Town Hall.

St. George Orchid Society.—11th July. Palais Grande, 8 Frederick Street, Rockdale.

• **QUEENSLAND ORCHID SOCIETY:**

—*Foundation Member is New Q.O.S. President.* An orchid enthusiast who helped found the Queensland Orchid Society twenty-five years ago is its new President.

He is Dr. H. E. Young, of the Brisbane suburb of Taringa.

Dr. Young is not new to the position, for on one previous occasion he was President of the Society.

The new President, who is a doctor of agricultural science, returned to Brisbane in 1956 after spending some time in Ceylon, where he had an opportunity of seeing extensive orchid collections.

The officers elected for this year are:

Patron, Sir John B. Chandler; President, Dr. H. E. Young; Vice-Presidents, Country, Mr. E. R. Whitehouse, Palmwoods, Mr. R. H. Bell, Mackay, Mr. J. E. Jones, Freshwater; Metropolitan, Mr. A. W. F. Kurth, Mr. P. G. Cran and Mr. P. Wren; Hon. Treasurer, Mr. P. Curley; Hon. Secretary, Mr. P. K. Searle; Hon. Technical Adviser, Professor D. A. Herbert; Hon. Editor, Mr. P. G. Cran; Hon. Auditor, Mr. D. J. C. Goffage; Hon. Librarian, Mr. E. Merritt; Committee of Management, Messrs. C. O. Dunn, W. D. Marshall, S. E. Barnet, G. L. Piper, D. S. McFarlane; Judging Panel, Messrs. A. P. Blair, F. Hayes, E. A. Knoblauch, T. C. Harveyson, R. F. McFadzean, P. Wren, P. Curley, G. L. Piper, A. W. F. Kurth, C. G. Williams, P. K. Searle and P.G. Cran.—P.G.C.

• **FRONT COVER:**—Phalaenopses photographed by Mr. Fred Moulen in one of his "antiques". These spray orchids lend themselves to this type of decorative effect without any pretence of the correct method of "arranged" formal table decoration.

Cymbidiums—Beds or Pots?

J. N. RENTOUL

• Growing cymbidiums in beds is not an innovation in Australia, as some people imagine. These methods of growing have a habit of popping up in periods and then being discarded for years, to come back again later in some other place. The reasons for the cultural disuse of beds are many. When added up they all give the same answer, which, without labouring the point too much, will be apparent to most readers who stop to think things out for themselves.

There is no easier way for flower production of any sort than to aim at mass-production. All the small problems of minor numbers disappear when bulk product is dealt with, as the deficiencies tend to be swamped out in the overall annual balance sheet. Even this cannot hide the facts when plants are taken individually.

Going back many years, to the period 1939-40, my mind turns to one who, though perhaps not the initiator of bed culture of cymbidiums, was one of the first I met—the late Albert Royce, of Aqua Flora Park, Sans Souci, N.S.W. Most orchid growers can also turn their minds back to the same kindly man and the same place, where orchids appeared to perfection in a setting that finally took too much time and strength from Albert Royce for its maintenance. Fish ponds were an added attraction. They were large and extensive, and when flower pots became such a prohibitive article in the war years, Albert Royce turned to his fish ponds and emptied them and planted his cymbidiums in them after allowing for some drainage holes in the cement bottoms. Situated as he was on a sandy peninsula, this was all that was necessary to make the ponds release their water into the Sahara underneath. But it was perhaps the pot shortage as much as anything that caused him to turn the ponds into cymbidium beds.

But even before Albert Royce converted his fish ponds, he had cymbidiums growing in terraces all over his park. Many were species, but there were great plants of *Cym. Pauwelsii* (not an inferior type like the Editor's) luxuriating and spreading to their content. They produced enormous racemes of flowers—up to thirty on some spikes. *Lowianum* also grew well and produced their long arching green and gold spikes. *Eburneum*, with its prim two or three

white flowers, so sweetly scented, flowered on small plants every year. They were all bed grown, whether terraced or not, and their hybrid, *Lowio-Eburneum*, did as well in the same place.

Good hybrids of the new Alexanderi 'Westonbirt' strain were in extremely minor numbers in those days, and what there were came to us as small seedlings, later flooding in a great rush as the war pushed them out of England into Australia and America. Naturally, these plants were grown in pots, and as they grew their way into larger pots small divisions were made. But pots were soon at a premium and the enormous number of cymbidiums found their way into other containers such as twenty-four inch sections of drainpipe stood on end. Although they allowed unlimited scope for the plant, this was where knowledge burst like a bomb on some growers. They did not seem to flower as readily when given a free rein.

Where the financial situation of a grower did not run to twenty-four inch pipe, some other alternative had to be found, and it was here that necessity forced the growers to plant cymbidiums as we do other flowering plants—out in specially prepared beds. What is or was used for the filling of these beds does not matter a scrap to this story; we are concerned only with what happens to the plants and how they cope with the easy living they find in beds.

PLANT PROCESSES

Perhaps we could say when we hybridised our cymbidiums we cluttered up their nice flowering habits with so many weird inhibitions that some of them never flower at all. They cannot seem ever to mature into the stage where the supreme effort of all plants culminates. Others have their hereditary flowering genes so scrambled that they almost flower into shrivelled shadows. But in between the two extremes are those which flower readily (the minority) and those which need a substantial clone before they condescend to produce one or more spikes of flower. It would be difficult to ascribe any of these characteristics to the species as we know them, except to say that *insigne* is not the easiest of them to flower, *Lowianum* is ready to flower on two or three bulbs, *eburneum* on quite a small plant. The three mixed seem at war, but *Lowio-Eburneum*

flowers readily and so does *Pauwelsii* (*Lowianum* x *insigne*). Of course, some other misguided persons introduced an occasional touch of *Traceyanum* (easy flowering), *Grandiflorum* and *Giganteum* (not so easy).

In this mixture of bloodlines lies the amazing range of colour and season that our flowers give us. But on the debit side must be counted the irregular flowering hybrids and the thousands of small seedlings that never grow beyond the dwarf stage, together with those which grow large plants before they produce their poor flowers.

In studying plant processes as typified in their foliage and plant form, it is not possible to attach importance to such things as robustness or the colour of the bulbs. Welded into the entity of each plant are things that we cannot guess at, and our appreciative points need not necessarily portray what the plant as a member of a genus finds either desirable or comfortable. In this category comes the doubling of chromosomes and the extension of this phase into sterility. Natural selection would soon rid the world of such things, and where we perpetuate them we must be prepared to accept what follows in the process. Quite importantly that includes flowering, and it is in this stage of the plant processes that *beds are "out"*.

POOR FEATURES

When compared with natural situation, what we as growers can offer the plant as a place to live has many deficiencies. Sometimes those deficiencies are in the nature of the container—its porosity, its composition and its acid or alkaline constitution. All are capable of modification in some measure, but in this regard pots are less suitable as a place to grow cymbidiums than beds, which can be constituted at will and adjusted readily to suit both season and plant processes. But it is doubtful if the adjustment will reach out so far that the plant can be induced to produce flowers if it feels that its condition is one of immaturity. Perhaps it is not too much to say that is self-evident, otherwise none of us would bother growing a plant beyond the second bulb. By that time we would have induced it to disclose its form if we had that control. Some do flower on their second bulb—very few. Many go considerably toward their sixth bulb before they flower, and many more to an enormous plant before they produce a flower in bed culture. In pots, the chances are that they would long since have disclosed their worth. This means, of course, a poor out-

look for the grower, who must wait until the plant again develops a large structure after division.

Though pots in large numbers need more careful watching where watering is concerned, one tending to dry out before another, this feature is absent in bed culture, but it is necessary to see that any bed designed for cymbidium culture has great scope for drainage. Preferably situated on a slope and with good porosity, it would still be necessary to completely drain the beds with agricultural pipes to ensure that the residues from fertilisers do not build up in the immediate sub-soil or above the water table. Where sand has been proved to depth the risk still is there of either salting up or getting too high a concentration of mineral salts where drainage ceases. Just as salt disappears from sea water on land near the sea margin, nutrient salts also tend to leave the water and lodge in the material the water flows through. Aggregation of nutrient salts spells death to any plant.

EFFECTS ON FLOWERING

We are faced with the choice between two failures when deciding how to grow cymbidiums. It is necessary to decide which of the two failures is the most economic. That works both ways. On sober consideration from the point of view of a small grower, the bed system has nothing whatever to recommend it. As outlined above, in the greater number of cases a large plant of many varieties must be grown before the plant will flower in a bed. There is neither the room nor the intention to wait for most growers. If flowering can be achieved in an eight-inch pot, that is economy demonstrated for the average grower. Of course, there are plants that readily flower even as they grow larger. But they are few in number. They are the type to cultivate in beds. Perhaps we can breed more of them in the future, though the odds are against that with our heterogeneous mixture.

The process of waiting until the plants flower in beds and then digging them up and forcing the shattered root system into a pot or other container serves its short-term purpose very well, so long as the plant is sold or otherwise disposed of. Perhaps some of our growers with experience will stop biting their fingernails and add something to this. It is not only the plant dug up that suffers; those adjacent must also suffer some root pruning, even if that is the least they finally merit. Any attempt at moving the plant once it has established itself

in a growing bed means that it must be re-propagated and brought to maturity again. The material and root debris left behind cannot be removed. It must be left there to rot with any disease, virus or otherwise, in the roots left there to contaminate the following plant. A plant in a pot can be disposed of entirely—even including the pot if the prophylactic sense of the grower is so attenuated.

CHOICE BETWEEN POOR SYSTEMS

All composts, tan-bark or other material, are becoming more difficult to buy or fabricate. It would not be stretching it too far to say that the material to fill a cymbidium bed thirty feet by five feet with tan-bark compost would keep a grower with a glass house that size in compost for very many years. What he would save on compost would not be dissipated on pots (of either sort). Supposing that his material lasts three years in pots (perhaps two years for a faster growing plant), he could repot several times from a tan-bark bed two feet deep and still accommodate more plants than by the bed method.

Now let us look at it from a large commercial point of view. The initial expense of pots gives facility of handling, and to my mind induces flowering of some varieties many years sooner than if they were bed grown. With the increasing demand for somewhat shorter spikes of from eight to twelve flowers this is worth consideration, because the plants can be completely repotted every second year without losing a spike. The root system is contained and easily dealt with. The longer roots are on the older part of the plant that is cut away, and if the system is good plant size is well controlled, so that one is never faced with a series of chopped-off roots that cannot effect necessary reconstitution when replanted in a bed that is watered and fed heavily, as it must be with some replanted plants mixed in with ones already established. To completely replant a large bed, replacing the compost with fresh, is something that would make most growers rebel; but it must be done almost as soon as the repotting process in containers.

The labour problem of annual and seasonal functions, though largely solved for commercial growers by the bed system, looms up in another way in the watering and nutrient problems involved. To get the best from bed culture it must be rigidly controlled—by skilled labour. The unskilled labour can turn on the taps, cart out the old compost and refill the growing beds, but it is still necessary even if it is part-

time. The skilled labour must still decide when to repot, how to divide the plant, and even carry out that task. It seems, however, that it was the labour angle that induced the cultivation of cymbidiums in beds as other commercial flowers are grown. It has been tried with other orchids—*cyripediums* and *cattleyas*—and the same deficiencies were manifest to the growers who tried them. The plants were virtually immovable. Certainly they could be dug up and put into a pot, but there is always a price to pay in damaged roots. The plants flowered no sooner or better in beds, and when disturbed they took some time to recover.

And so we go back to Albert Royce. After his propagations of early 'Westonbirt' hybrids had attained strength he decided to plant them out into beds. How they grew! And still grew! But they took their time about flowering and most of them did so in the one year. A magnificent sight! But they all had to be dug up and the bed replanted after refilling. And then they grew again, and Albert cut chunks off for this one and that one, and so they never really got to flowering again as they did the first time. Gradually they were put back into the pots and the large pipes, where they grew just as well and flowered more regularly. And they were so much easier to handle. If Albert felt energetic few people could keep up with him at the potting bench and, despite what seemed rough treatment, they all thrived.

Probably one day the cymbidium-bed growers in Australia will scratch their heads if they have any hair, and they will say to themselves, "We should have put them into pots long ago," and I for one will agree. But then again, I have been wrong before, have been reminded of it, but remain completely uneducated by the experience.

—43 Denman Ave., Glen Iris, Vic.

• *PARRAMATTA AND DISTRICT ORCHID SOCIETY*:—Decade as President.—Mr. A. J. Webb will this year complete a decade as President of the Parramatta and District Orchid Society. He was re-elected for a tenth term at the annual meeting on February 2nd.

Other officers elected for 1959 were:—Vice-President, Mr. R. Green; Hon. Secretary, Mr. G. Hall; Treasurer and Librarian, Mr. A. Evans; Minute Secretary, Mrs. B. Pawley; Committee, Messrs. R. Hopkins, G. Lynch, G. Griffiths, F. H. Thresher, R. Miller and S. A. Batchelor.—C. E. Sligo.

Winter Care for Orchids in Southern Queensland

G. L. PIPER

• The approach of cool weather brings a slowing of plant growth, and in the cooler parts of Queensland there is practically no growth at all in some types of orchids such as phalaenopsis, vanda and allied genera.

Although the cooler conditions retard the growth of a plant, it does not always reduce its flowering ability. Therefore, special care must be taken if flower loss or damage is to be avoided.

Watering can be reduced in most cases because of lower temperatures and light values. All growers have different ideas on how much water their plants should receive. This varies with the weather and aspects and type of housing they receive, together with the size of pots and the type of compost.

If different composts are being used by one grower, it may be possible to group each compost type together. Plants in fibre can be kept separate from any in an earthy or a very open type of compost.

Any pot-size variation can be graded in each group—it is obvious that an eight-inch pot will take longer to dry out than a small one. The grading for size and compost type will help those growers who have the time and inclination to dip their plants, instead of carrying out overhead watering.

Growers who water overhead will also find the grading of pots helpful, because it separates plants which may need a light spray only from those requiring a heavy hosing.

Fertilisers

The reduced activity of the plant will need a reduction in fertiliser supply. This is particularly so with regard to nitrogen supplying salts.

Excessive use of plant nutrients with a high nitrogen content generally results in soft growth, unless accompanied by high light intensity. It also tends to produce vegetation at the expense of blooms.

Several plant foods in common use have a high nitrogen content and over-use of them has resulted in plants which look attractive, but which either fail to flower or flower at a reduced rate.

Most chemical foods have the ratio of salts printed on the containers and this makes it simple to find a suitable one. The first figure indicates the nitrogen content and it is best for

winter to pick one with a low number such as four or six, rather than those with sixteen, eighteen or twenty.

Bud Drop and Bud Rot

This is a problem for nearly every grower and unfortunately information on the causes is somewhat complicated.

It is generally accepted that bud drop is apparently caused by a large and rapid temperature variation. A second theory is that lack of ventilation is the cause. Personally, I have had more bud drop from plants grown in the open garden than in a small glass house that has ventilation from a few cracks in the glazing, and which has a temperature range from 120 degrees to 80 degrees through the day and night.

Also, my own experience is that dendrobiums which have *D. ceratobium* in their breeding are very prone to bud drop. The higher the percentage, the worse the flower loss, appears to be the rule.

D. undulatum does not appear to cause bud loss in any of its hybrids.

D. phalaenopsis sometimes lose buds at the dried pea size stage, and this is generally thought to be caused by low temperatures.

Cattleyas sometimes rot in the sheath and, unless the sheath shows damage, this loss is usually due to low temperatures.

Removal to a warmer and rather drier place should prevent trouble with these two genera.

Cypripediums, near flowering, should be dipped to prevent losses caused by moisture in the folds of the top leaves.

Vandas, particularly strap leaf types, often have bud rot caused by water remaining in the leaf folds. The leaf folds should be cleaned regularly, with special care to the leaves higher up. After dust and dirt has been flushed out, a copper spray can be applied to control the leaf markings generally referred to as winter spot. This usually shows on strap leaf plants—especially those with *Sanderiana* in their make-up.

Light

All plants can use increased light in the cold months by thinning out shade materials. Paint can be scraped or brushed thinner with a steel brush, and brush or lath shading can be opened out. If required, plants can be lifted closer to the roof.

Many plants can be given full sun through the day, with shading from about 11 a.m. to 3 p.m. Vandas, cattleyas and cane dendrobiums do well in full winter sun, providing they have had the increase in light spread over several weeks.

Pests

Most pests reduce their activity as temperatures drop and the days become shorter, but there will always be odd scale insects to keep in check. A popular spray is made up of half a teaspoon of each of the following: nicotine sul-

phate, white oil and soft soap, mixed in a pint of water that is preferably "soft". Fungicides can be added if necessary, but their compatibility with white oil should be carefully checked first.

General work can be carried out on pot cleaning, painting and compost preparation, with sterilising of materials for use with small plants.

Any pots showing excessive damping should have the drainage holes checked to prevent root rot from excess water.

Sterilising Orchid Seed for Planting

W. E. GRAVES

• When orchid seed is placed in a sterilising solution, minute air bubbles form around the ovules which sometimes carry mould spores into the flasks unless the seed and sterilising solution is shaken vigorously for fifteen minutes.

These air bubbles can be completely removed before sterilising, and the time required for sterilising can be reduced from fifteen minutes to three or four minutes if the seed is soaked in water for a period of several hours, or overnight.

This can be accomplished by filling small plastic bottles (half an inch by two inches) to the one-half inch mark with distilled water and then adding the seed. Allow the seed to remain in the bottles for several hours, or overnight. When the soaking time is over, check the water level of the bottles to make sure it is at the one-half inch mark; if it is not, add more distilled water. To ensure accuracy of measurement file then mark with ink depth levels of one-half inch and one inch. Next, dissolve one chlorine tablet (the kind used for sterilising orchid seed), in one-half ounce of distilled water (this makes the solution double strength), and add to the bottles to the one-inch mark. Now shake the bottles vigorously for three or four minutes and then pour into sterilised flasks and restopper immediately. Rotate the flasks until the seed is set uniformly on the agar then pour off the chlorine solution.

An easy way of sterilising the flasks before the seed is planted is to place the flasks containing the medium, immediately after cooking, into an oven set at two hundred and fifty degrees Fahrenheit for thirty minutes, remove

from the oven, and repeat the process twelve hours later, setting the control this time at two hundred and seventy-five degrees, for thirty minutes. Place aluminium foil over the stoppers to protect them from the heat and to reduce mould spores from collecting around the stoppers and the rim of the flasks. Wipe the stoppers and the rim of the flasks with the sterilising solution before removing them for planting and hold your breath when planting the seed so as not to blow mould spores into the flasks.

At the present time tests are being made to hasten germination by adding sugar to the distilled water into which the seeds are soaking, using the same proportion of sugar as used in Knudson's formula (a scant one-fourth teaspoon to one ounce of water); also in some tests fertilisers, as used in Knudson's formula, and in that proportion, are added. It will take several weeks or months to evaluate the results of these tests, and they are mentioned here with the thought that some other person may want to experiment along this line.

Some advantages to be gained by using this method are: the sterilising time is reduced five-fold, thus eliminating all danger of over-sterilising the seed; the ovules, by becoming saturated with water before sterilising, retain less chlorine; the ovules are heavier and distribute more evenly over the agar and start germinating faster.

One test of this method was to plant five flasks of seed which had been sterilised for only one minute, and not one flask showed any mould after being in the flask for three weeks.

—2743 Kelton Ave., Los Angeles 64, Calif.



MILTONIA VEXILLARIA LYOTH (*Vexillaria*. (*Chelsiensis*) x *Vexillaria* (G. B. Owen))

Registered by Charlesworth & Co., England in 1914. The outstanding "dancing lady" pattern on this bloom would be envied if produced by modern hybridists in the matching colours as shown here.



CATTLEYA HERTHA 'ROSEMONT'

A.M. O.S. of N.S.W. Ltd. 1958. Owner, J. Chapman. This plant carried one flower 6" in size, of very good shape and texture. The petals and sepals were coloured petunia purple while the labellum was orchid purple streaked with yellow in the throat. Reg. No. 375.



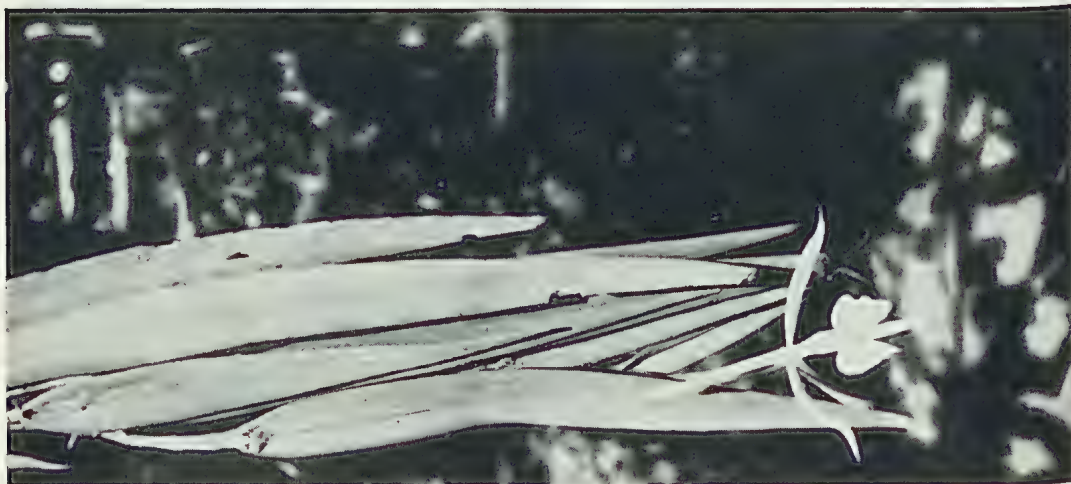
CATTLEYA GALLIARD 'RAPALLO'

H.C.C. O.S. of N.S.W. Ltd. 25-8-58. Owner, J. Chapman. This plant carried four flowers and one bud; the flower judged was 6½" across; the petals, sepals, fringe and stem of the labellum were all cyclamen purple. The labellum had a band varying to 1½" wide across it of orchid purple, and then a band of maize yellow. The labellum was 3" across, the petals 3½" in depth. Reg. No. 381.



ONCIDIUM JONESIANUM

This native of Paraguay adopts various attitudes—most specimens we have of it in Australia grow pendulous; however the new growth in the illustration has turned erect. Photo by G. H. Slade.



EPIDENDRUM PARKINSONIANUM

A pendulous orchid with large succulent Aloe like leaves. Syn. E. falcatum. Photo by G. H. Slade.

Pendulous Orchids

G. HERMON SLADE

• Most living things adopt the erect position; man prefers to stand on his feet rather than on his head. Some animals and plants, however, are normally pendulous. Bats, including the Flying Fox, Glow Worms and Sloths, hang head downwards. In the vegetable kingdom there are pendulous lichens, mosses and lycopods such as the tassel fern, but there are only a few pendulous flowering plants; these include a number of Columneas and some orchids.

Many structural things, especially fibres, are stronger in tension than in compression; a suspended object subject to external forces like strong winds will automatically return to the normal position. A pendulum can withstand any storm.

The advantages of an orchid developing a pendulous habit are so numerous it is surprising that more of them have not adopted this method of growth.

Of our indigenous orchids with pendulous habit, *Dendrobium teretefolium* and *D. striolatum* are completely so; whereas *D. Becklerii* of similar terete appearance is scandent and predominantly erect. *Dendrobium tetragonum* is quite pendulous, but most of our other dendrobiums are erect. Some native orchids seem to have no preferred habit; for example, *Dendrobium cucumerinum* and *D. linguiforme* grow in quite random directions, some leaves ascending, others sideways, in fact, at all angles.

Of the exotics, there are numerous interesting pendulous orchids. *Cattleya citrina*, a fascinating and beautiful Mexican orchid, grows from the underside of branches with its roots uppermost, its leaves and flower spike hang downwards.

Other completely pendulous exotic orchids are *Epidendrum Parkinsonianum* and *Epidendrum Loeffgrenii*. The former has a flexible wiry stem on which hang the fleshy heavy leaves, the latter plant hangs limply so that the beautifully designed leaves which shed water from their tips form a composite roof which protects the growing tip from rain. The terminal flowers of this species are thus beautifully canopied over so that, despite continuous rain, they do not become wet.

Both the Scutucarias, *S. Hadwenii* and *S. Steelii*, are completely pendulous, with long rat tail like leaves hanging from the root matrix.

Of exotic orchids which seem to grow in random directions, *Miltonia spectabilis* is an example. Grown in a pot, it develops an ungainly habit, but placed on the branch of a Frangipanni it surrounds the stem, making a graceful tuft with leaves and flower spikes appearing at all angles, like a Sea Urchin.

Some Indian dendrobiums are pendulous; these include many beautiful ones such as *D. Falconeri*, *D. Devonianum*, *D. crassinode*, *D. Wardianum* and tall types of *D. nobile*. The young growths start more or less erect, but bend under their own weight as growth proceeds. When grown in a pot these plants look a pathetic sight, often flopping over the sides, while if staked they look about as ungainly and unhappy as a caged sloth would if someone thought the animal walked like a dog and insisted on having it upright.

If these pendulous dendrobiums are grown on the vertical sides of blocks of tree fern fibre and are allowed to grow naturally, their pendulous habit makes them most graceful and beautiful objects; their stems develop a delightful curved aspect, sickle shaped, with the growing tip looking upward; their leaves always arrange themselves at right angles to the light.

At least one orchid seems undecided. Most literary references cite *Oncidium Jonesianum* as pendulous, others as erect. Richard Doering, a botanist who lives in Brazil, writes that it is erect. Of the several plants I have, two are growing on Frangipanni, three are on tree fern blocks. All were originally placed in the erect position. Those on the trees have sent their new growths definitely downward, straight and decided; the blocks were then turned over so that the three plants on the blocks were roots up, leaves down. The growths have come out at various angles, but seem to be curving upwards, one plant decidedly so. Can other growers enlighten our readers on how this beautiful and interesting orchid grows?

Of the oncidiums, *O. Jonesianum* is one of the most attractive. Disregard the comments in the literature that it is difficult to grow. Place it outside, affixed to a block on a fence or wall, fully exposed to sun and wind; it will then grow as readily as many orchids cited as difficult—for example, the Mexican *Laelias*; or *Oncidium crispum* and *O. varicosum*. All these plants just revel in such outdoor conditions and

grow more easily than almost any plant I know, orchid or otherwise.

Returning to pendulous orchids: if they are pendant in habit let them hang naturally; they will thus demonstrate how graceful and well designed the pendulous system is.

Check over your unruly plants. Those dendrobes which constantly need staking could take on a new lease of life and show a distinct and beautiful charm if allowed to grow as Nature designed them.

• Sometimes pictures and figures seem oddly at variance with experience, and this was most vividly brought to mind when looking at the picture in the last issue of the A.O.R. of what was undoubtedly the best spike of Dorchester 'Jeanette' we have seen in Australia. In another magazine, *The Cymbidium Society News*, from California, was a picture of the runner-up to Dorchester 'Jeanette' at the last Sydney Orchid Festival. Unfortunately, it in no way resembled Balkis 'Patricia' as we saw it at the Sydney Orchid Festival, and will possibly be the basis for another false impression of a "ballyhoo" orchid from Australia. If that is the best that can be had from Balkis 'Patricia' in U.S.A., then the outlook for reciprocal exchange between our countries is rather dim. I think Fred Stewart will do much better than that.

However, to get back to Dorchester. I was rather surprised to see the measurement of the flower given as $4\frac{1}{8}$ inches. Perhaps flowers shrink. That would be a reasonable supposition for flowers exposed to poor air conditions over a few days in a show, but that they could shrink down to $3\frac{5}{8}$ inches in three days is rather surprising, as when I measured them on Friday, the last day of the show, they made $3\frac{5}{8}$ inches.

While giving credence to reasonable explanations, one cannot help reverting to black suppositions about manipulation and all the evils that judging rules and procedure have sought to eradicate over the years. To my mind, rather than legislate to prohibit something that can be evaded, let us adopt the right frame of mind and give the best exhibit its due, however produced. After all, in a rose or chrysanthemum show the best flowers are all manipulated and groomed to present their best faces to the judges, so why must we be different? Many an exhibit has been condemned for a damning shred of fibre that may or may not be cotton-wool, a material that has now been

by-passed for others less hazardous, so why keep up a pretence that something is what it really isn't?—J. N. Rentoul.

• **OBITUARY:**—The sudden passing of the late R. H. Caton, at the age of sixty-three, was indeed a sad loss to everyone who knew him. We of the Gosford and District Orchid Society felt it very keenly, as he was our very capable President and was held in high esteem by every member.

In his capacity as President he dealt with business at meetings in a very business-like and capable manner. He was impartial in all his decisions and made all members at meetings feel at home.

He was one of the Associate Judges to the Orchid Society of N.S.W., elected by this Society, and was also a Judge at our Society's monthly meetings.

His orchid collection was considerable, and his main interest was in flowering odontoglossums and cymbidiums—an art in which he excelled. It was quite usual for him to win competitive sections as well as popular vote sections at monthly meetings. He also had much success as an exhibitor at our Annual Exhibitions.

He had held the position of President for the past three and a half years, being unopposed at each annual meeting.

In private life he was an electrical engineer for the Brisbane Water County Council, living through the week at Avoca and returning to Katoomba at week-ends to see his family and tend his orchids, among which, together with matters pertaining to orchids, he was at his happiest.—H. Partridge-Wall.

• **TOWNSVILLE ORCHID SOCIETY:**—An active orchid society has its headquarters in Townsville.

Office bearers for 1959 are:

Patron, Mr. R. P. Kirke; President, Mr. J. K. Tate; Vice-Presidents, City, Mrs. I. Nott and Messrs. A. C. Nielsen, P. H. Warner and J. McKimm; Country, Messrs. A. Schnepel, Cordelia, and P. K. Searle, Brisbane; Hon. Secretary/Treasurer, Mr. R. H. Merritt; Assistant Secretary/Treasurer, Mrs. R. H. Merritt; Hon. Technical Adviser, Mr. J. S. Berge; Committee, Mrs. G. Ridge and Messrs. H. Arrowsmith, J. Kirke, C. Harrison, W. Grey and G. Herring.

The Townsville Orchid Society meets on the fourth Friday of each month in the Townsville Women's Club, commencing at 8 p.m.—P.G.C.

Codes of Nomenclature as They Apply to Orchids

W. W. G. MOIR

• The two Codes of Nomenclature—the International Code of Botanical Nomenclature (ICBN) and the International Code of Nomenclature for Cultivated Plants (ICNCP) are both written to cover orchid nomenclature, but I think we are better served by the first or more basic code of plants. There is little, if any, requirement for Orchid nomenclature that cannot be found in the ICBN. The only apparent reason for ICNCP is to attempt to take care of common names of plants in cultivation, a job that is colossal in scope and continually confused each day by the promiscuous naming of any variation of a plant by its owner. Its main point seems to be the giving of a third name to every plant that the ICBN has already covered either by Articles 24 through 27 or Article H5 of Appendix I. It adds to the confusion by providing a different means of naming this third name provided in the aforesaid articles of the last sentence.

Let us roughly review these codes and comment on them.

ICBN

The International Code of Botanical Nomenclature (1956) covers two following Divisions: I Principles, II Rules and Recommendations, and III Provisions for Modification of the Code. There are six principles in Division I, six chapters in II and four provisions in III. Division II chapters cover the following points:

1. Ranks of taxa and the terms denoting them with five articles.

2. Names of taxa (General Provisions)—definitions; typification; priority; limitation of the principle of priority; publication, starting points and conservation of names.

3. Nomenclature of taxa according to their rank—names of taxa above the rank of order; names of orders and sub-orders; names of families and sub-families, tribes and sub-tribes; names of genera and sub-divisions of genera; names of species; names of taxa below rank or species (infra-specific taxa); names of plants in cultivation.

4. Effective and valid publication — conditions and dates of effective publication; conditions and dates of valid publication; citation of author's names and of literature for purposes of precision.

5. Retention, choice and rejection of names — retention of names or epithets of taxa which are remodelled or divided; retention of epithets of taxa below the rank of genus on transference to another genus or species; choice of names when taxa of the same rank are united; choice of names of fungi with a pleomorphic life cycle; choice of names when the rank of a taxon is changed; rejection of names and epithets.

6. Orthography and gender of names—orthography of names and epithets; gender of generic names.

Appendix I to this Botanical Code covers names of Hybrids and some special Categories. This is the section which most orchidists should have and get acquainted with for it lays down the rules of how the genus or hybrid genus and its interspecific name (that is, the first and second name of an orchid) shall be composed.

Principle V of the ICBN states that "Scientific names of plants are Latin or are treated as Latin" so the second name of hybrids as governed by Appendix I must be in Latin, for it states "The name, which is subject to the same rules as names of species, is distinguished from the latter by the multiplication sign X before the ('specific') epithet." By referring back to Article 23 of the ICBN, we find the rules laid down without any reference to it being anything but Latin and also requiring a hyphen between words of the epithet if more than one. All examples given "are Latin or are treated as Latin."

Then in Article 3 of Appendix I we find the rules for bigenerics and in Article 4 for ternary or higher order of generic crosses with the requirements for ending the new "Generic" name and also the placing of the X before this name. Article 5 goes one step further and covers the variations in these hybrids or the very things that the Cultivated Code is taking over. This article gives the means for giving the third names to the orchid as a particular segregation out of the collective name that is given the specific hybrid. A revision of Appendix I should allow the use of common names for hybrids as well as the third name in Article 5 of Appendix I.

We could stop at this point with the ICBN and have all we want for Orchid nomenclature.

We might need some further rules to govern registration in our own plant family. However, before going on to ICNCP we would like to point out that Article 28 of ICBN would have to be rewritten. As it now reads:

"Plants brought into cultivation from the wild which differ in no fundamental way from the parent stocks bear the same names as are applied to the same species and infra-specific taxa in nature.

"Plants arising in cultivation through hybridization, mutation or other processes which tend to establish recognizable differences from the parent stocks receive epithets, preferably in common language (i.e., fancy epithets), markedly different from the Latin epithets of species or varieties.

"Detailed regulations for the nomenclature of plants in cultivation appear in the International Code of Nomenclature for Cultivated Plants."

This will have to be revised by the removal of the word hybridization and by rewriting the second paragraph so that there is no conflict between Article 5 of Appendix I and the way Article 28 is now written. It does not seem to me necessary to have the third paragraph of this article.

It would seem from reading Appendix I most all ordinary names are illegitimate, but provisions are in the Code (ICBN) for allowing them to stand.

Before we go ahead with any further illegitimacy, let's straighten it out.

We may hear comments at this point that the ICBN endorses the ICNCP as issued. Actually, how could it when the ICBN was adopted in 1956 and the ICNCP, which at one time was an Appendix III to the ICBN and then dropped in 1956, was not adopted until 1958 and in a very much revised form?

ICNCP

Now let us discuss the Cultivated Code. It has ten sections or whatever you wish to call them, for they no longer have lettered Sections as in the past.

The first section — General Considerations and Guiding Principles — with six articles, states the Botanical Code "governs the use of scientific ('Latin') names for both cultivated and wild plants" and that this Cultivated Code is trying to put order into the cultivar names; this is, the third name going onto an orchid hybrid.

The second section — Categories and Their Designation — reiterates again that "Cultiva-

ted plants are named at three main levels; genus, species and cultivar." Then two articles are taken to explain the very things that exist in the Botanical Code for genus and species names. Then three articles are taken up with the cultivar, which is divided into four kinds: "clone", "line", "assemblage of individuals" and "uniform group". Then, in case you cannot decide what to do with them, you have a "group" nomenclature. An example of a "clone" name would be all the individuals propagated asexually from one individual. If anyone were to do this in orchids he would give it a cultivar name (if a hybrid) before propagating it because it must be distinctive enough or he would not go to this trouble. No "line" cultivar exists in orchid hybrids—sexually reproduced to uniform appearance. In species the "line" is a natural phenomena. The "assemblage of individuals"—reproduced sexually—occurs in species and some species even when hybridized with other species only give their own offspring—apomixis. The "uniform group" again is a very rare case in orchid hybrids. The offspring from the same parents can vary considerably. In orchids, nearly every individual hybrid produced becomes a cultivar. Even in the F1 cross, uniformity is not too good—combining the same two good species over again produces some rather wide variations and, therefore, they might not be placed in the "group" category. However, a hybrid name (the species equivalent) is a group name to begin with.

The third section—Formulation and Use of Cultivar (Variety) Names — goes on with much the same kind of regulations as exists in the Botanical Code. In this section, Article 16 shows that you must either place a cv before the cultivar name or enclose it in single quotation marks and the name must start with a capital letter. I don't know which has priority, nm of Article H5 (ICBN) or this cv. Article 19 says that after January 1, 1959, the same cultivar name cannot be used with a genus or hybrid genus more than once without permission from the registration authority and only when one or more of certain conditions obtain. These are listed. This might rule out any name used by breeders for the cultivar name that they are in the habit of using for all their hybrid names. A list of inadmissible names is given in Article 21—names containing numerals or symbols; the scientific or common name of a genus or the common name of a species; names containing an initial article unless required by

linguistic custom; abbreviations at the beginning of a cultivar (variety) name; names containing forms of address liable to be confused; excessively long words or phrases; names exaggerating the merits of a cultivar (variety) or which may become inaccurate through the introduction of new cultivars (varieties); names that are vaguely descriptive; names within the same genus likely to be confused; names duplicated in closely related groups which although separated generically by some are placed by others in the same genus; and names of cultivars (varieties) of hybrid origin formed by combining parts of the Latin epithets of the parent species. (Please remember these are for the third name and not the hybrid species name or second name.)

The fourth section — Publication, Priority and Rejection of Cultivar (Variety) Names — practically all on the same tone as the terms in the Botanical Code, however, there are some very important items. After January 1, 1959, a description must accompany valid publication. Other important items also are spelled out including registration, rejection and exceptions. Article 35 says "From January 1, 1959, onwards, a name must be rejected if published without the permission of the originator of the cultivar (variety)". This can be a big headache here and elsewhere when people do not know who the originator is because of buying it second or third-hand. There is not enough control of registering the hybrid species name as to who was the originator, so why bother about the cultivar name.

The fifth section — Translations, Transliterations and Commercial Synonyms — and section six — Collective Names of Cultivars (Varieties) of Hybrid Origin — again cover in detail for a cultivar name that is covered for the hybrid species (interspecific hybrid) name. This Section 6 is really a big encroachment on Appendix I of the Botanical Code and leaves things in a real mess. By using the title "Collective Names of Cultivars (Varieties) of Hybrid Origin" the writers of this Code have tried to avoid Appendix I coverage, but they have failed badly. Article 38 is just plainly different to Appendix I and strictly in Appendix I's field of coverage. Then, having got away with that, the rest of the Section is based on this usurped coverage which is not theirs to cover.

The seventh section—Graft-Chimaeras—is of no interest to orchidists.

The eighth section—Registration of Cultivar

(Variety) Names — Section Nine — Trade Marks — and Section Ten — Modification of the Code — are interesting if one wants to register a third name.

There is an Appendix I and II covering Recommendations for the Guidance of Registration authorities and a list of International Registration authorities.

Now let us look at this picture sanely and with the thought of economy and simplification of the procedure of keeping records.

The Botanical Code covers the first two names of our orchid plants and also the third name of species. That Code has no requirement for a registration authority nor does it have regulations on registration authorities. So how can the Cultivated Code come along and rule on the same coverage? We, as orchidists, could completely ignore this Cultivated Code and continue our own systems of valid publication with someone running a register, such as Sanders. However, I am a firm believer in co-operation and getting the two Codes all ironed out as to coverage and making the same rules for naming of second and third names wherever possible. I think this can be done. But it does bring up the colossal job of trying to register the millions of orchids if cultivar names are to be required. Who will pay for it and what orchidist will pay the price, for the majority are poor. I wonder if the increase of the registration fee at the present time to three dollars has caused a stopping of registrations. I know many individuals here are holding back.

Actually, all one wants is a name to call the hybrid by and the Botanical Code only requires publication with certain details to follow. I see no reason why each community could not set up a registration centre and publish the names monthly in an orchid periodical. An International Committee could designate which publication and secure these publications for the purpose of determining priority of name. The local publication could then publish again the accepted names from all local centres recognized by the International Committee. This would stimulate local publications into a wider circulation and local communities could keep a card index system and periodically print lists by genera and hybrid-genera on a loose-leaf basis for entry in a List of Orchids book. On this basis we need no third name unless we cannot convince Orchid Judges to change their ruling on cultivar names, *a ruling which is not tied up with any Code*. There are some valuable qualifications in the ICNCP

that can be used to govern naming of plants and to straighten out the actual publication of names in literature.

Now, why should we make it so complicated and difficult for the common man to enjoy his orchid breeding and naming? It is my sincere wish that the Code authorities look at these comments and consider their position. Their Codes are so reminiscent of the creed of today—Regimentation—that it may be difficult, but I'm sure we are all willing to help simplify the process. Here's hoping we can get this done!

The reason for repeating this review is first to revise a similar one made in March by the writer and second to point out how useless it is to argue over the minor points of ICNCP and not settle the point that ICBN is fully sufficient to cover our naming of orchids. The correspondence passing between Mr. Dillon, the Secretary of the International Orchid Commission on Classification, Nomenclature and Registration, and Dr. George Lawrence, of the ICNCP Editorial Committee and also a member of the Orchid Commission, is the discussion on minor points above mentioned. It is excellent to have and reads well until the very last paragraph is read of the reply by Lawrence to the comments on Article 51 of the ICNCP.

Let me quote Mr. Dillon on Article 51.

"Registration set up here apply to cultivar names only. No provision has been made for this Code to cover the Registration of collective names. Is this an oversight or a deliberate intent? Also, unless 'third word' is called cultivar epithet, registration of cultivar names refers only to the name in single quotes and does not require, except by implication, the scientific, collective or common name. Thus there is no control by Registrar over validity of any part of name other than 'third word' or cultivar name. Recommend that this third word be called epithet and the cultivar name be the full scientific, collective or common name with cultivar epithet attached."

Answers by Lawrence:

"Correct. It is left to the organization maintaining a registry to develop its requirements where special circumstances require. It was deliberate to leave out reference to registration of collective names. The R.H.S., for example, no longer requires registration of collective names of rhododendron—only the cultivar names. There is no intent to require such registration for any group of plants as far as the Code is concerned. The Commission will be

most happy if registration of cultivars is carried out as broadly outlined in this Code. Where a particular registering agency wishes to develop these requirements further (providing for registration of collective names, for example), then that is fine with the Commission. Article 51 provides minimal requirements, not maximal."

Here we get a really clear-cut statement of where ICNCP is in orchid nomenclature. It definitely has nothing to do with our naming of hybrids or species. That naming comes under ICBN. Please reread the answer by Lawrence and replace *Rhododendron* with *Dendrobium* or *Vanda*; for example, *Den. Hawaii* and you now call its variations *Dendrobium* "Green-Gold" or *Den. "Bronze"* or you took, for example, *Vanda sanderiana* and only now call its variations *Vanda Fireball* or *Vanda Noa*. I do not want to think of the confusion that would arise.

The ICBN covers our way of nomenclature fully except for the use of common names for the collective hybrid name and common names for the third name of "nothomorph" of Article 5. Let us forget the ICNCP and stay by the ICBN. We can set up rules to govern our registration under ICBN and be a lot happier in the long run.

—Box 2298, P.O., Honolulu, T.H.

• MANNING RIVER ORCHID SCTY.—

The Annual Meeting was held on Friday, 6th March, in the Staff Room of the Commonwealth Bank, Taree.

Secretary-Treasurer Mr. George Coleman revealed that the Society had a very successful year both socially and financially.

The election of officers resulted:

Patron, Mr. W. Rothwell; President, Mr. H. Bury; Vice-Presidents, Messrs. J. C. Folkard, E. McGregor and W. E. Wrigley; Secretary, Mr. G. Coleman; Treasurer, Mrs. Morse; Publicity Officer, Mr. T. R. B. Boyce; Auditor, Mr. T. Mitchison; Judge, Mr. W. Rothwell.

The meeting night was fixed for the first Friday night in each month.

The point score for shield and £2/2/0 prize conducted by popular vote for orchids displayed at monthly meetings resulted: Mr. G. Coleman 32½ points; Mr. B. Kerr 16½ points; Mr. R. Eoyce 13 points; Mr. J. C. Folkard 10 points; Miss Peel 10 points; Mr. W. E. Wrigley 10 points.—T. R. B. Boyce.

Winter Culture in Tasmania

F. W. CHILVERS

• The winter treatment of orchid plants in Tasmania is rather a difficult one. In spite of many sunny days from June onwards, the majority of days lack warmth and the nights are cold and often damp. This can have quite severe reactions on plants not in a robust condition, and care should be exercised in their treatment, particularly in watering.

Many growers are fortunate to have artificial heating where temperature and atmosphere can be controlled; this is the ideal whenever possible, but the majority have no artificial heat and grow their orchids under cold conditions and in conjunction with other green house plants.

Although the majority of cool house orchids are very accommodating plants and grow reasonably well under varying temperatures, even temperatures without severe fluctuations always give the best results.

When houses have artificial heat, the hot dry conditions created by pipes should be avoided whenever possible, as hot dry air rising through the plants can cause damage and pests will thrive. This dry heat must be counteracted by "damping down" around the pipes or erecting shields that will divert the hot air, and slight top and bottom ventilation that can cause the air to circulate evenly. Artificial heat should be reduced to a minimum through the day time.

With the "cold house", the greatest hazard is the "too damp" and cold conditions that can occur after the winter period. This, too, should be guarded against whenever possible, or severe damping off will occur in young growths and flower spikes. For any house, excluding the "Tropical House", a buoyant atmosphere or an atmosphere that is "comfortable to work in" should be the aim; these are old growers' definitions, but are only too true for successful culture.

Average temperature at night should not, for the general variety of plants, fall below 40 degrees to 45 degrees, and rising sun temperatures through the day should be counteracted by judicious ventilation without causing draughts, this should be avoided at all costs. Closing ventilation in the late afternoon will conserve sun heat and save the fuel bill, but care should be used with mixed plants, or damping off will occur.

This period of the year is the time for a general "Spring Clean" and also cleaning of the roof glass to ensure all the light possible to enable the plants to become hardy, although where odontoglossums and allied subjects are grown, a shaded section is not detrimental. All plants should be examined for scale, red spider and other pests. Such diseases can sap the strength from any plant. Plants can be dipped in a suitable solution where possible, but all moisture must be drained off from the leaves or damping off will occur. Sponging of the leaves and bulbs regularly will save many disappointments later on. A thorough airing underneath and the cleansing of the benches assists in keeping pests under control.

An old custom practised by many growers that assists in maintaining a sweet and refreshing atmosphere in a house is to spray occasionally with "soot water". It requires a few pounds of soot tied in a hessian bag and plunged into a two to four gallon tin of water. After soaking for a few days approximately one pint of the solution is added to one gallon of water, and this solution is watered or sprayed on the footpaths and under the benches of the glass house every week or fortnight, preferably in late afternoon or evening. You will be surprised at the sweet atmosphere this will create and its aid as a deterrent to slugs under the benches.

This is also the time to collect your material for spring potting, and to clean and store this in a dry place; oak leaves should be collected before they decay, also fern fibre—charcoal and coarse sand. These should be stored in suitable bins for the busy spring period. Potting mixture can then be mixed well in advance with greater care.

In regard to particular varieties of plants, the following points should receive attention:
CYMBIDIUMS

Healthy plants should be showing flower spikes and in many would be well advanced. On no account should a flower spike touch the cold roof glass or be too close, as cold can affect them severely. A piece of cotton wool wrapped around the spike often saves disaster from slugs. Flower spikes, too, should be tied to split cane or thin dowels to train them to the best advantage, but should not be tied too tightly.

Care in watering is important; plants should

not be allowed to dry out where spikes and new growths are evident, but should not be watered excessively. An occasional drying out of the pot assists in maintaining the sweetness in the compost. Plants that have "made up" all pseudo-bulbs and showing no growth and no flower spikes can be dried out until bulbs show signs of shrivelling. This may induce spikes to develop, but must not be carried to excess. Weaker plants in poor condition should be watered sparingly; continual wet conditions of the roots can cause decay and the plants will suffer a severe setback. Young healthy back bulbs with a new growth should not be allowed to dry out, and any watering of plants should be done on a fine day.

If excess moss collects on the top of the pots this should be removed (excluding sphagnum moss). Excessive moss can exclude aeration of the compost and create rapid decay and stagnation of the material. Where sphagnum moss is encouraged to grow, this gives a good indication of the moisture content of a plant. Sphagnum remains green when wet and whitish in colour when dry. Lifting a pot gives a good indication of the moisture content; lightness shows the compost is drying out. This is generally a safe guide except where pots are huge in size.

Plants of *grandiflorum*, *Hookerianum* or kindred crosses where buds fail to open can be placed nearer the glass to induce opening, but should be removed at night time.

Back bulbs showing new growth should be kept in the warmest corner of the glass house; polythene may assist in providing warmth.

To growers growing plants on verandahs and similar handy conditions: The chief precaution is to prevent severe draughts, and care in watering. A glass or polythene shield would be very helpful. Excellent results are being shown from small houses of polythene and this could assist new growers in the initial stages of building up a collection at small cost.

DENDROBIUMS

Dendrobiums of the *nobile* variety will have "made up" their pseudo-bulbs at this period and will need less water at the roots. It is advisable to hang these varieties from the roof rafters to allow them to harden and obtain all the light possible through the winter months. Good healthy plants that have been shy in flowering could be "dried out" until the pseudo-bulbs shrivel; this will induce flowering and is not harmful to the plants, unless it has many new growths. When the buds start to swell at

the node watering can commence. Mealy scale often attack these plants and should be sponged off with a soft sponge or brush. Other types of dendrobiums need all the light possible at this period, varieties of *thyrsoiflorum*, *densiflorum* and Australian species can be dried out without harm to induce flowering.

The majority of oncidiums can also be treated like dendrobiums, and when hung from the roof gives them all the light possible, and drying out may induce flowering.

CYPRIPEDIUMS

Many of these orchids will be showing flower spikes; care should be taken in not allowing moisture to collect in the axils of the leaves, or damping off will occur. Plants also should not be allowed to become dry, but should be watered with care. A hot dry atmosphere is harmful to most cypripediums and an occasional damping down of the benches and floor is necessary on sunny days.

Varieties with mottled leaves, *Maudiae*, for example, require more warmth and should be moved to the warmest corner of the glass house for the winter period. All plants should be examined for red spider and thrips, which will discolour the undersides of the leaves. Excessive cold and dampness can cause decay at the base of the leaves, and frequent examination of plants is necessary to check this. Slight shade is not harmful to these plants even in winter time, but reasonable light and air induces strong healthy growth.

ODONTOGLOSSUMS

Although very few are being grown in Tasmania at present, the climate of this island does ensure a great future for these particular plants when they become more popular and known to orchid enthusiasts. The majority of these plants, if well grown, will have made up their growth or be showing new growth.

They dislike any hot or dry atmosphere and dry surroundings and a shaded and sheltered corner of the glass house usually suits them very well. Excessive watering can injure the root action; care in watering is essential through the winter months. Where bulbs have matured a slight drying out can help to induce flower spikes and harden a plant. But this is detrimental if new growth is showing.

Plants of *miltonia* and *odontioda* require more warmth and care, and a sheltered corner is essential for these varieties.

Plants with soft and sappy growth should be watched carefully or damping off will occur. Light and air only can induce hard and sturdy

growth on any plant, and growers should notice this reaction in plants from the "feel" and textures of the leaves. It is not advisable to allow a weak plant to flower even in spite of anxiety to see the type. By removing the spike and allowing the plant to build up new growth is well worth the sacrifice for one year.

LYCASTES

Care also should be given in watering these plants; they should never be continually wet or root action will suffer. Leaves should be sprayed with a soft sponge to remove any scale that might be present. The loss of a few leaves on the older bulbs is quite normal; care should be taken if leaves fall on new bulbs as this denotes root trouble or excess cold and dampness.

LAELIAS

Plants of *Laelia anceps*; this delightful little species can grace any collection. Hanging near the roof gives them all the light possible and induces flowering.

COELOGYNE

Plants of *Coelogyne cristata*, if shy in flowering through previous years, can be dried out to severe shrivelling point without detriment to the plant and, as growth or spikes show, watering should be resumed.

CATTLEYA and ALLIED GENERA

Plants of this genus should not be allowed to deteriorate by low temperatures and cold and damp conditions. They are not suitable for the average mixed glass house as they require warmer conditions and a degree of humidity to grow successfully. Plants should be examined for scale and sprayed from time to time. Careful watering is also essential through the winter period. Plants of *laelia* hybrids need even greater care through these periods. It is most advisable to water such plants with "house temperature water" and not cold water from the house.

• **THIRD WORLD ORCHID CONFERENCE, LONDON, 1960:**—The Third World Orchid Conference, which is being sponsored jointly by the American Orchid Society, the British Orchid Growers' Association and The Royal Horticultural Society, will be held in London in 1960. The first conference was held in St. Louis, Missouri, U.S.A., in 1954 and the second in Hawaii in 1957.

The exhibition of orchids arranged in connection with the Conference will be staged at the Chelsea Show on Tuesday, Wednesday, Thursday and Friday, May 24-27, and the

Conference will be held in the following week on Monday, Tuesday, Wednesday and Thursday, May 30 and 31, June 1 and 2. It will be followed by excursions to leading orchid growers' establishments on Friday, Saturday and Sunday, June 3, 4 and 5.

A joint committee of the three sponsoring bodies is arranging a comprehensive programme covering a wide range of subjects of interest to amateur and professional orchid growers, and well-known authorities from many countries are being invited to deliver papers on the subjects in which they have specialised.

All who are interested, whether members of one of the above-mentioned organisations or not, will be welcome and are invited to notify:

The Secretary, The Third World Orchid Conference, c/- The Royal Horticultural Society, Vincent Square, London, S.W.1.

• **SHOALHAVEN ORCHID SOCIETY:**—The Annual General Meeting of the Shoalhaven Orchid Society was held in the Fire Station, Junction Street, Nowra, on the 13th March, at 8 p.m., where there was a good attendance of members.

An interesting report was presented by the President (Mr. D. O'Brien) on the activities of the Society over the most successful year ever held by the Society. Enthusiasm was shown each month for the large numbers of plants that were exhibited by members in the popular vote competition. Three cymbidium seedlings were purchased by the Society as prizes for the competition.

Mr. A. J. Morison was successful in taking out first position, with Mr. J. Apperley second and Mr. A. Brown third.

The Fourth Annual Orchid Show of the Society will be held on Sunday and Monday, the 20th and 21st September, 1959, at the R.S.L. Hall, Junction Street, Nowra.

The Office Bearers elected for 1959-60 were as follows:

Patroness: Mrs. N. Rodway, O.B.E., Nowra. Patron: Mr. R. W. Hall, Avalon Beach. President: Mr. D. O'Brien, Nowra. Vice-President: Mrs. McLean. Secretary: Mr. A. J. Morison, Junction St., Nowra. Treasurer: Mr. J. Apperley, Nowra. Auditor: Mr. H. Payne, Nowra. Publicity Officer and Assistant Secretary: Mr. John Morison, Pyree via Nowra.

• One last reminder — the Winter Orchid Festival — June 25-26th — Larke Hoskins Showroom, Sydney.



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot "Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and
yellow.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Primulinum, 30/-. Pale to dark
mauve.
D. Fimbriatum, var.: occulatum, 30/-
Yellow, maroon throat.
D. Farmerii, 30/-. Pale pink.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/-. Pale mauve.
D. Hildebrandii, 30/-. White and
yellow.
D. Densiflorum, 25/-. Yellow.
D. Densiflorum, 30/-. Yellow.

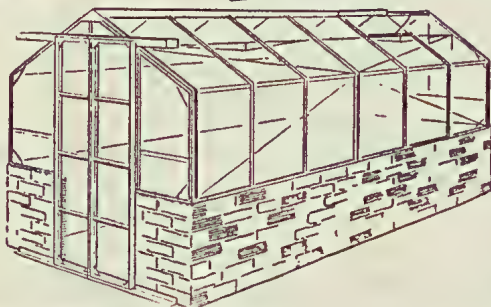
AIR FREIGHT EXTRA. ALL PLANTS 30/- FLOWERING SIZE

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet
Price: £93. 12. 6.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

NEW ADDRESS

All Orchid Friends and Correspondents please
note I have moved from Lane Cove. Future
address will be

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE, N.S.W.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

Corrugated Fibreglass Sheets

These are ideal covering for your orchid houses. Translucent, 80% sunlight. Long life, easy to fit by any handyman.

PRICES { 6ft. x 2ft. 8in. corrugated sheets £5.
8ft. x 2ft. 8in. corrugated sheets £6/10/0.

Also ideal for verandahs, sun rooms, etc.

FOR DETAILS RING XJ5350

OR CALL

14 CHANDOS ST., BALGOWLAH

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

ORCHID BOOKS

- A CULTURAL TABLE OF ORCHIDACEOUS PLANTS (J. Murray Cox), col. & B/W plates, scarce and out of print. £8.10.0. Post 2/-.
- ORCHIDS OF PERU (C. Schweinfurth), illust. map. £3.0.0. Post 1/6d.
- ORCHID HANDBOOK, compiled by J. Bisset, A. B. Porter and H. J. Lawler, for the Orchid Society of N.S.W. 8/6d. Post 6d.
- ORCHIDS (Matthias Riehl), cultural notes, history of Orchids, and with 16 colour plates from the original water-colour drawings by Karl Alexander. £3.2.0. Post 1/6d.
- SANDER'S LIST OF ORCHID HYBRIDS ADDENDUM 1946, 1947, 1948, ¼ morocco. £2.9.9. Post 1/3.
- ORCHIDS ARE EASY TO GROW (Logan & Cosper), complete manual of orchid culture, col. & B/W plates. £3.15/0. Post 1/9d.
- ORCHIDS, THEIR CULTURE & CLASSIFICATION (P. A. Gilbert, N.S.W.), illust. £2.2.0. Post 1/6d.
- SANDER'S LIST OF ORCHID HYBRIDS ADDENDUM. 1952-1954. £3.12.6. Post 1/3d.
- BENEATH THE GLASSHOUSE ROOF (C. H. Potter). How to select, construct, and use, your greenhouse, illust. £2.12.6. Post 1/6d.
- GROWING PLANTS UNDER ARTIFICIAL LIGHTS (Peggie Schultz), illust. £1.17.0. Post 1/3d.
- ORCHIDS, THEIR CULTURE (Bruce Hogg, Melb.), col. & B/W plates. £2/10/0. Post 1/3d.
- ALBUM DES ORCHIDEES (H. Correvon) 1899, 60 col. plates, French Text, s/hand. £5/15/0. Post 1/6d.
- ORCHIDS, THEIR CULTURE & MANAGEMENT (W. Watson & W. Bean), 1893, 2nd revised edn., col. & B/W plates, s/hand. £7.15.0. Post 3/-.
- We search the world successfully for Rare and Out-of-print Books.
- Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.
- We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.
- 10X British Aplanatic folding Magnifiers—of great use to Orchid lovers, £3.11.6.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

Choice New Cattleya Seedlings

*Fine young plants of superb development from 2" pots,
with three and four leaved bulbs.*

L.C. Gloria x C. Ballantineana
Cattleya Atlantic x C. Findon

„ Horatius x C. Leda

B.L.C. E. F. Hanbury x B.C. Hartland

B.L.C. Treleigh x L.C. Gloria

B.L.C. Treleigh x B.C. Hartland

*Large rich magenta for October to March.
Rich magenta large fine broad petals for
flower in November to April.*

*Delicate rose mauve well rounded broad
petalled flowers for December to March.*

*Extra large rich rose magenta, heavy texture,
fine shape for December to May.*

*Large rose mauve shapely flowers, large
magenta lip. Flowers October to December.*

*Large rose mauve shapely flowers, large
magenta lip. Flowers October to December.*

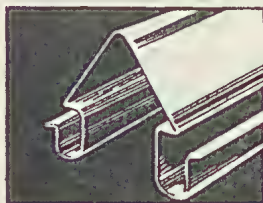
Twelve fine crosses in variety for 12 guineas.

By Air Parcel Mail—all charges covered.

STUART LOW (Benenden) LTD.

JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931

49 Aird Street, Parramatta — YL9961

135 Forest Rd., Hurstville — LU2066

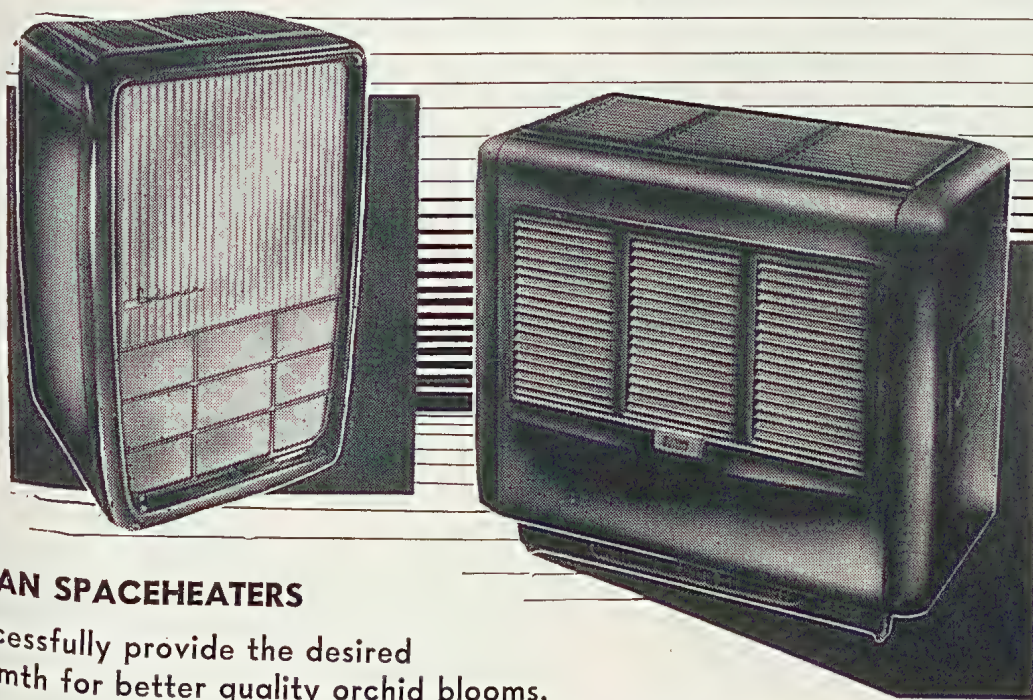
67-69 Burelli St., Wollongong—B3301-8

932 Pacific Highway, Chatswood—JA3462

Don't wait for winter...

OVERCOME YOUR GLASSHOUSE HEATING PROBLEMS
NOW AND MAINTAIN **TROPICAL TEMPERATURES**
THROUGHOUT THE COLDEST WEATHER - - - -

With a **SWAN SPACEHEATER** fumes are totally
eliminated — **NO MORE "BUD DROP"**



SWAN SPACEHEATERS

successfully provide the desired
warmth for better quality orchid blooms.

- No attention required • Silent operation.
- Constant temperatures maintained • Absolutely odourless

THE INEXPENSIVE FUEL OIL CAN BE
DELIVERED TO YOUR NURSERY, CITY OR
COUNTRY, BY THE MAJOR OIL COM-
PANIES.

SELECT **SWAN** FOR
YOUR **COLEMAN** HEATER
FREE SURVEY SERVICE

SWAN REFRIGERATION (DISTRIBUTORS) PTY. LTD.

Refrigeration, Heating
& Air Conditioning Engineers

93 WILLIAM STREET,
SYDNEY

FA 9318

SEND THIS COUPON NOW FOR FREE DETAILS
OF ALL GLASSHOUSE HEATING REQUIRE-
MENTS.

NAME:

ADDRESS:

O.R. 1/59.



No. 24
(See List "Limberlost" Seedlings below)

Typical of "Limberlost" Seedlings
available in
Sanderiana Type Strap Leaf Vandas



"LIMBERLOST" Orchid Seedlings

*First General Offering of Orchid Seedlings to Old
and New Growers. Fascinating Hybrids that will bring
both Pleasure and Profit as they mature.*

"LIMBERLOST" ORCHID SEEDLINGS

- No. 10. Vanda Tatzeri x V. Caroline Robinson.
No. 13. Vanda Mary Foster x V. Gertrude Myamoto.
No. 37. Vanda Tatzeri x V. Coerulea.
No. 46. Vanda Suavis x V. Sanderiana.
No. 40. Phalaenopsis Denevei x Arachnis Maggie-Oei.
No. 24. Dendrobium Schroederianum bicolor.
No. 27. Dendrobium Broomfieldii x D. Janice Tanaka.
No. 39. Dendrobium Broomfieldii x D. Phalaenopsis var. Snow White.
No. 48. Dendrobium Bigibbum x D. Veratrifolia.
No. 57. Dendrobium Toftii x D. Phalaenopsis var. Snow White.
No. 58. Dendrobium Toftii x D. Phalaenopsis var. Snow White.
No. 175. Dendrobium Aureckleii x D. Phalaenopsis var. Snow White.
No. 254. Dendrobium Bigibbum x D. Mirbellianum.
No. 255. Dendrobium Anouk x D. Agnes Ann.
No. 258. Dendrobium Lady Hamilton x D. Helen Fukumura.
No. 177. Dendrobium Phalaenopsis Alba x D. Phalaenopsis var. Snow White.
No. 134. Dendrobium Superbum giganteum x D. Superbum var. buttonii.
No. 193. Dendrobium Dicuophum x D. Canaliculatum var. pallidum.
No. 232. Dendrobium Sanders Crimson x D. Tangerine.
No. 149. Cymbidium Aloifolium x C. Bicolor.
No. 30. Vanda Henrietta Ho x Arachnis Maggie-Oei.
No. 35. Vanda Dearei x Arachnis Ishbel.
No. 36. Vanda Henrietta Ho x Arachnis Ishbel.
No. 55. Vanda Alice Fukunaga x Arachnis Maggei-Oei.
No. 60. Vanda Tatzeri x Arachnis Ishbel.
No. 63. Vanda Henrietta Ho x Arachnis Insignis.
No. 75. Vanda Tatzeri x Arachnis Ishbel.
No. 71. Vanda Tatzeri x Arachnis Insignis.
No. 32. Vanda Henrietta Ho x Vanda Dearei.
No. 22. Vanda Ernest Fujinaga V. Sanderiana.
No. 56. Vanda Cooperii var. Choo Yam Neo x V. Joaquim var. Atherton.
No. 141. Opsisanda Kenneth Morley x Vanda Kon Tiki.
No. 194. Vanda Teres Alba x V. Ellen Noa.
No. 200. Vanda Manila x V. Gilbert Triboulet.
No. 242. Vanda Diana x V. La Paloma.
No. 237. Vanda Parishii var. Mariottiana x V. Ellen Noa.
No. 147. Vanda Tatzeri x V. Suavis.
No. 97. Vanda Madam Dinger Java variety x V. Alice Fukunaga.
No. 142. Vanda Manila x V. Alice Fukunaga.
No. 151. Vanda Kon Tiki x V. Manila.
No. 166. V. Alice Fukunaga x V. Denisoniana var. herbraica.
No. 150. Vanda Manila x Ellen Noa.
No. 164. Vanda Ellen Noa x V. Suavis.
No. 153. Vanda Queenie Pie x V. Manila.
No. 136. Vanda Manila x V. Suavis.
No. 184. Vanda Manila x Opsisanda Kenneth Morley.

ABOVE PLANTS 2" to 6" (depending on variety) 7/6 each £4/4/- per
doz. (Assorted if desired).

No. 163. Dendrobium ANOUK (D. Phalaenopsis FCC self x D. Pom-
padour) 4" to 6"—15/- each.

PHALAENOPSIS SEEDLINGS

- No. 197. (Rothschildiana x Avalanche) x Bess Wells.
No. 198. Lachesis x Marmouset.
No. 216. Doris x Venustus.
No. 217. (Marmouset x Ruby FCC) x Reve Rose.

ABOVE PLANTS 2" to 3" 15/- each.

Please add 7/6 with orders to cover Air Freight and forwarding charges
If phone number, please add.

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER
CAIRNS . . . N.Q.

UNSURPASSED QUALITY
ORCHIDS

by
(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

ORCHID GROWERS !

Save Time

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year of 4 issues posted.

*Agents for the "Australian Orchid Review"
in Great Britain*

Messrs. B. F. Stevens & Brown Ltd.,
Library & Fine Art Agents,
77-79 Duke Street,
Grosvenor Square, W.1.
LONDON

are carrying stocks of current and back num-
bers of the *Australian Orchid Review*.
Readers in Great Britain should communi-
cate with them regarding their supplies.

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Largest Raisers of Cymbidiums in Australia

20,000 Seedlings always in Stock

Raised in Australia by Australians, bred from the best Australian and overseas parents.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 10/- to 20/-	} ex Nursery
in 6" pots from 20/- to 30/-	

Early flowering and exhibition crosses always available. Many of our seedlings are flowering in 12 months, while the balance should flower in 2 years.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Monday to Saturday, 8 a.m. to 5 p.m. Sundays by appointment only.

Our seedlings are also available from Mr. F. Slattery, Bexley, at list prices.

WONDABAH ORCHIDS

724 Pennant Hills Rd.

Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

MON., JUNE, 29th MON., JULY 27th MON., AUGUST ~~24th~~ 31st

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon Editor: H. J. LAWLER, 535 Willarong Rd., Beauty Point, Caringbah. LB9442.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

FRI., JUNE 12th FRI., JULY 10th FRI., AUGUST 14th

Patron: Sir JOHN B. CHANDLER

President: E. A. KNOBLAUCH

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

MON., JUNE 15th MON., JULY 20th MON., AUGUST 17th

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide

THURS., JUNE ~~24th~~ 4th THURS., JULY 2nd THURS., AUGUST 6th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: N. CHRISTOPH, 18 Clinton Avenue, Myrtle Bank.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

FRI., JUNE 26th FRI., JULY 24th FRI., AUGUST 28th

Patron: Sir ROSS McLARTY, Pinjarra.

President: E. L. THOMAS, 239 Railway Road, Daglish

Treasurer: C. W. CONNOR, 42 Birkett Street, Bedford Park.

Secretary: H. W. HILL, 20 Waterford Street, Inglewood.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross. *President:* F. W. Chilvers. *Hon. Secretary:* Mrs. R. F. Gee,
16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review



PUBLISHED QUARTERLY

VOLUME 24, No. 3

PRICE 3/6

SEPTEMBER, 1959



VANDA COERULEA

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA AND THE TASMANIAN ORCHID SOCIETY.

Published at the G.P.O. (Selling) in accordance with the Act of 1958 (No. 100).

... Enchanting ...



CYMBIDIUM GIRRAHWEEN 'ENID'

Here is an excellent opportunity to add new varieties to your collection at reasonable cost.

VANDAS. Latest American strap leaf and semi-terete types. A good variety of these plants available in various sizes. Plants offered include the famous "NELLY MORLEY" John Noa's, Original 512 cross.

CATTLEYAS. A good selection of modern hybrids nearing flowering size.

MILTONIAS. Flowering size plants. Latest French hybrids.

PHALAENOPSES. Seedlings available in pinks and whites.

CYMBIDIUMS. All the top-class awards and show varieties on hand. Also top-line scarce types namely RIO RITA 'RADIANT', F.C.C.R.H.S., MIRETTA 'MATCH-LESS', Best Green and Award of Distinction N.S.W.O.S. Festival, 1958. Marmie Kingsford 'Erin', H.C.C. Aldis Lamp 'Arncliffe', Nam Khan 'Naomi', Balkis 'Jeanette' and many others.

HUNDREDS OF BACK BULBS TO SUIT EVERYBODY

... Frank Slattery's ...

... Orchids ...

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

They are all sturdy bush-house grown plants ex 4" pots. Lists Available.

SUSSEX 'LAELIA SASSO' H.C.	x PEARL 'MAGNIFICUM' F.C.C.	15/-
" " " "	x MONICA 'THE FINEST'	10/-
" " " "	x ATHENS 'TANANDRA'	15/-
" " " "	x PROFITA 'LUATH' H.C.	20/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x FASCINATION No. 2 (RED)	15/-
FIREBIRD 'DOVER HEIGHTS'	x OLYMPUS 'ROSY QUEEN'	15/-
PEARL 'MAGNIFICUM' F.C.C.	x "	10/-
" " " "	x MIDLOTHIAN 'GREENSLEEVES'	15/-
" " " "	x ATHENS 'TANANDRA'	15/-
PINK BEAUTY	x PEARL 'MAGNIFICUM' F.C.C.	10/-
RUSPER 'WAVERLEY' A.D.	x "	10/-
BALKIS 'LUATH' A.M.	x CARISBROOK " "	20/-
" " " "	x REMUS F.C.C.	20/-
" " " "	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
CARIGA 'SORRENTO'	x SWALLOW	15/-
CARIGA 'SORRENTO'	x SUSSEX 'LAELIO SASSO' H.C.	20/-
CARIGA 'JULIA'	x SWALLOW	10/-
SPARTA 'ETNA' A.D.	x CARISBROOK BRICK A.D.	10/-
LUCIFER 'DIANNE' A.D.	x PINK BEAUTY	10/-
ALEXANDERII 'WESTONBIRT' F.C.C.	x MIDLOTHIAN 'GREENSLEEVES' H.C.	15/-
" " " "	x FIREBIRD 'DOVER HEIGHTS'	15/-
" " " "	x BLUE SMOKE No. 1 (CALIFORNIA)	20/-
" " " "	x PEARL 'MAGNIFICUM' (JADE)	15/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x SPARTAN QUEEN 'MERRILONG' A.D.	15/-
" " " "	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
PAUWELSII C. De 'HEMPTINE' F.C.C.	x CARISBROOK 'THELMA' A.D.	15/-
REMUS F.C.C.	x "	15/-
SPARTAN QUEEN 'MERRILONG' A.D.	x FASCINATION 'CRIMSON' GLORY' A.D.	20/-
" " " "	x REMUS F.C.C.	15/-
MAYFAIR F.C.C. 'STONEHURST' "	x REMUS F.C.C.	20/-

The nursery is open 7 days weekly and visitors are always welcome.

Plants are sent everywhere in Australia or overseas on request.

PLEASE SEND STAMPED ADDRESSED ENVELOPES FOR LISTS

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985

... For Perfection ...



JUDY

Seedlings flowering for the first time from our cross 4033.4046

Rosalita Dos Pueblos x Rosanna Pinkie FCC/RHS

Pinks — Whites — Blush pinks

The above photograph is of the seedling JUDY fiesta (HCC, A.O.S.) which was bloomed at Goleta, California, in April 1959. It is a fine example of the material which can be expected from this cross. Excellent quality pinks for commercial flower production and many award types can be anticipated from this splendid combination.

5" Pot. £4.10.0

6" Pot. £5.10.0

8" Pot. £12.10.0

dos pueblos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Telephone:
98-6321

P.O. BOX 28

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.



ROSARITA

Seedling flowering from our cross 251

Alexanderi Westonbirt FCC/RHS x Carisona 'Glendessary'

The above photograph is of ROSARITA MIDNIGHT; Bronze award, Cymbidium Society. Silver A.O.S., was flowered in California in April 1959.

Blush

— *Pastel Pinks* —

Rose

Hundreds of ROSARITAS will bloom this spring. Percentage wise, this cross has proven to be most exceptional.

WE HAVE YET TO SEE A SINGLE PLANT OF ROSARITA YIELD FLOWERS OF POOR QUALITY.

Divisions of the blooming plants may be selected during the current flowering season for early delivery.

Mail orders are
carefully filled.
Inquiries are
invited.

dos pueblos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Telephone:
98-6321

P.O. BOX 28

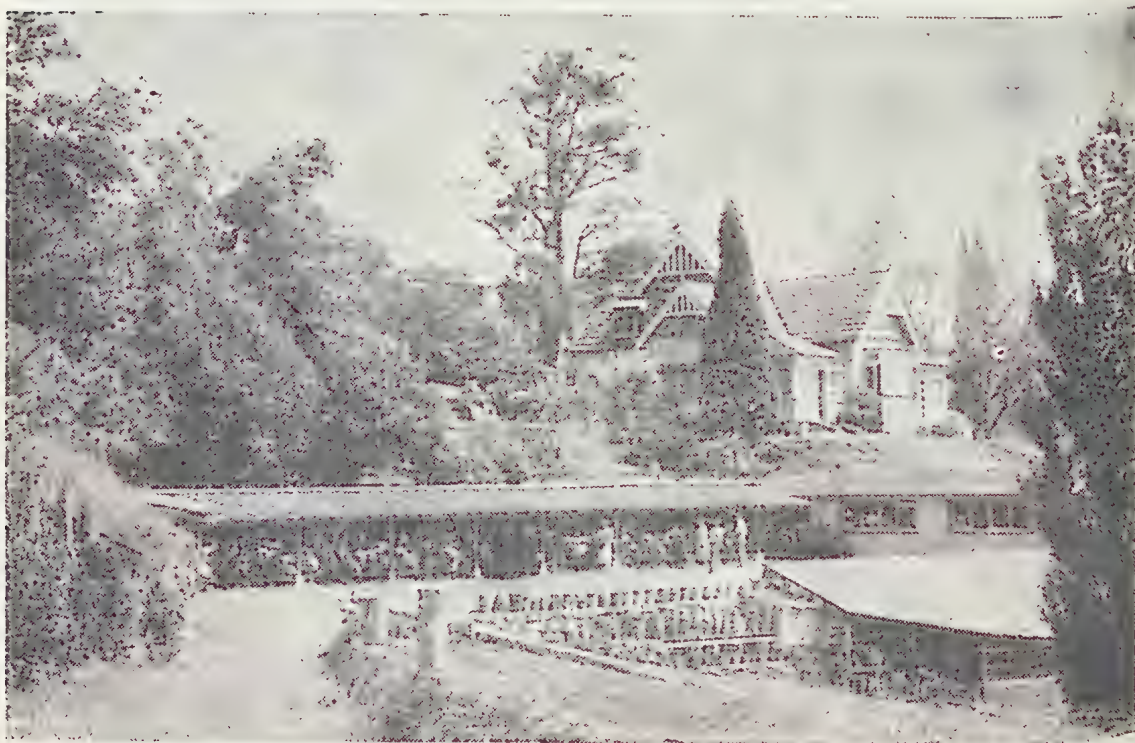
N.S.W.

Situation South Creek Rd., Dee Why, N.S.W.

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

*For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.*

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cyripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim

- | | | | | | |
|-----|------------|---------------|---|-------|--------------|
| 304 | Vanda | tricolor | x | Vanda | Sanderiana |
| 11 | Dendrobium | Schroderianuf | x | Dend. | taurinum. |
| 218 | " | veratrifolia | x | " | Broomfieldii |
| 689 | " | Miyamoto | x | Vanda | dearei |
| 643 | " | tricolor | x | Vanda | Luzonica |
| 647 | Arachnis | Maggie Oei | x | Vanda | Sanderiana |

30/-
EACH
3" POTS.
AVERAGE
7" to 9"
HIGH

15/-
EACH
2" POTS
AVERAGE
4" to 8"
HIGH

- | | | | | | |
|------|------------|---------------|---|------------|--------------------|
| 830 | Dendrobium | veratrifolia | x | Dend. | taurinum |
| 689 | " | Miyamoto | x | Vanda | dearei |
| 643 | " | tricolor | x | Vanda | Luzonica |
| 964 | " | broomfieldii | x | " | |
| 868 | " | Miyamoto | x | Renanthera | Storei |
| 730 | " | suavis | x | Renanthera | Storei |
| 772 | " | Hawaii Nui | x | " | stratiotes. |
| 942 | " | Ishbel | x | Vanda | Manila |
| 836 | Dend. | Schroderianum | x | Dend. | taurinum |
| 1021 | " | Toftii | x | Dend. | Phalaenopsis alba. |
| 218 | " | veratrifolia | x | Dend. | Broomfieldii |

- | | | | | | |
|------|-------|---------------|---|-----------|--------------------|
| 836 | Dend. | Schroderianum | x | Dend. | taurinum |
| 830 | " | veratrifolia | x | Dend. | taurinum |
| 964 | " | Broomfieldii | x | Dend. | taurinum |
| 1021 | " | toftii | x | Dend. | Phalaenopsis Alba. |
| 772 | " | Hawaii Nui | x | Dend. | stratiotes |
| — | " | superbiens | x | Dend. | Schroderianum FCC. |
| 1037 | " | Bali | x | Dend. | Mauna Kea. |
| 643 | Vanda | tricolor | x | Vanda | Luzonica. |
| 689 | " | Miyamoto | x | Vanda | dearei |
| 882 | " | Mary Foster | x | Vandopsis | lissochiloides |
| — | " | Flamerolle | x | Vanda | suavis. |
| 650 | " | Boschii | x | Vanda | Sanderiana |

8/-
EACH
OUT OF
COMMUNITY
BASKETS.
AVERAGE
3" to 5"
HIGH

Add Postage and Air Freight

KIRKWOODS ORCHIDS

342 SHERIDAN STREET, CAIRNS, NORTH QUEENSLAND

ORCHID SUPPLIES **from FRANK SLATTERY**

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

A handy revised booklet containing a selection of names and parentage, also awards granted by the Orchid Societies of N.S.W. and Vic. 5/-, plus 8d. postage. Or if the above is not required then send for our booklet "Orchids for All," which is free and post free.

Australian Todea Fibre
Tan Bark
Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the Nursery and can be inspected.



Available in Australia for the first time
the famous American "**MONARCH**"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT
**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £7.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

French grown Odontoglossum and Odontioda seedlings in large variety at exceptionally low prices.

Miltonia seedlings, both French and English raised.

Hawaiian Dendrobium seedlings of the best crosses, from 10/-

Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.

French and American Phalaenopsis seedlings, ranging in price from 25/- to 90/-, according to size and cross.

Intergeneric Oncidium seedlings of interest at 10/- each.

Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of Cattleya seedlings in all sizes for you to select from. These range in price from 20/- for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

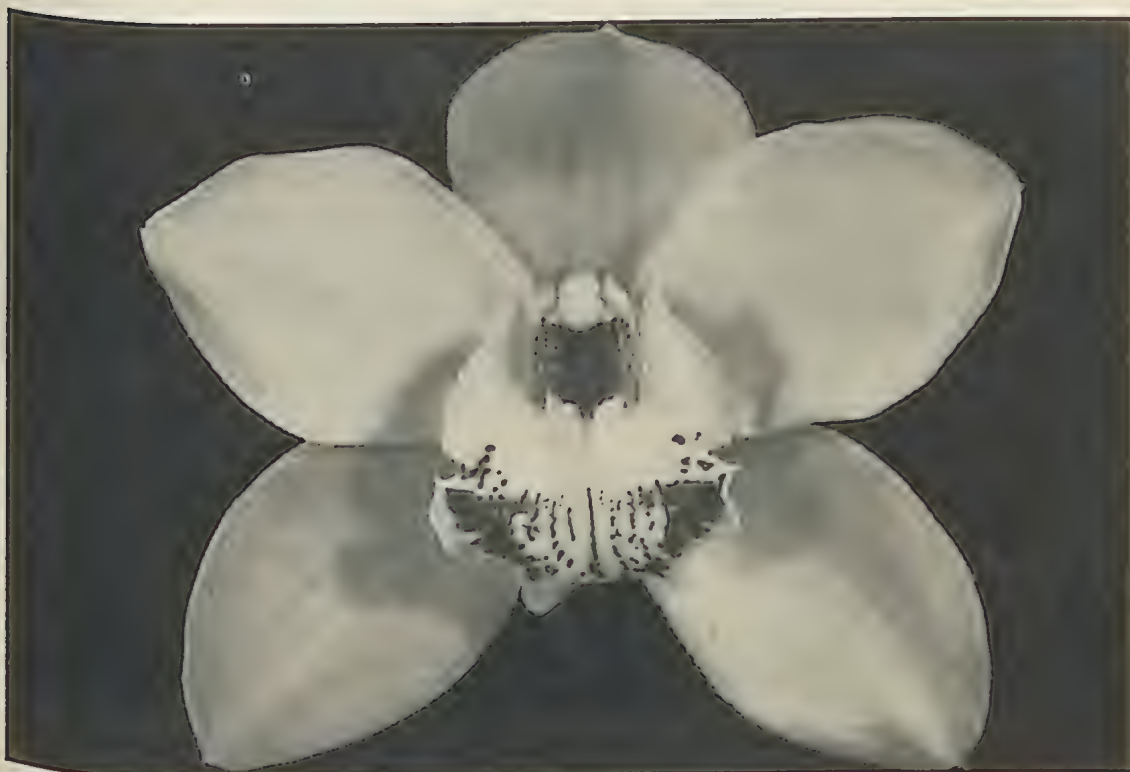
Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(*Cymbidium Lillian Stewart, 'Mona Lisa'*)

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

A Book for all Animal and Bird Lovers

Bush Animals of Australia

By AXEL POIGNANT

*With Notes on Birds and Reptiles by J. R. Kinghorn, C.M.Z.S.
and on Furred Animals by Ellis Troughton, C.M.Z.S., F.R.Z.S.*

Containing 40 pages, each $14\frac{1}{4} \times 9\frac{1}{2}$ inches, of magnificent
Original Photographs of the Animals of Australia.

OBTAINABLE FROM ALL LEADING BOOKSELLERS

OR FROM

THE SHEPHERD PRESS, YURONG STREET, SYDNEY, N.S.W.

JOIN THE ORCHID SOCIETY OF N.S.W.

Membership entitles you to:—

- Twelve issues of the Monthly Circular containing Cultural Notes for each calendar month as well as a description of the various plants tabled for competition.
- A comprehensive Orchid Library—Books can be procured on loan for one month.
- Regular Monthly Meetings in the Y.W.C.A., Liverpool St., Sydney.
- A Letter Service for Country Members desiring cultural hints.
- Four quarterly issues of this Review if required.

Write for a nomination form to Secretary

K. LAMONT 42 LAWLEY CRESCENT, PYMBLE

Brazilian and Central American ONCIDIUMS

A selection of interesting Oncidiums includes:

ONCIDIUM CRISPUM GRANDIFLORUM, BRAZIL

Flowers 2" to 3" in diameter produced on large branched spikes up to 50 blooms

Autumn bloomer

Block culture shadehouse

Colour glossy brown with few yellow and red marks £3.10.0

ONCIDIUM FORBESII

Flower 2" across, spikes 12" to 18" long carry 1 to 2 dozen flowers

Colour glossy red brown with bright yellow margins

Culture: Blocks in shadehouse £3.10.0

ONCIDIUM GARDNERI

Flowers 2" to 3" in diameter on arching branched sprays. Popularly known as "The Gold Laced Orchid"

£4. 0.0

ONCIDIUM JONESIANUM

Flower 2" across; spikes to 2ft. long carrying 12 flowers

Colour creamy white with spots of dark red brown.

The lip is pure white with crimson spot and yellow crest.

Culture: Blocks in shadehouse £3.10.0

ONCIDIUM SARCODES

Spring bloomer. Flower spikes 2 to 5 ft. long, branched, many flowers about 2" in diameter.

Colour yellow with purplish centres; bright yellow lip. £3.10.0

ONCIDIUM VARICOSUM

Strong plants of this well known dancing girl orchid.

£3.10.0

Strong well established plants available October 1959.

Send for our list of Central American Orchid Species.

dos puebllos

Orchid Company
(AUST.) PTY. LTD.

DEE WHY

Telephone:
98-6321

P.O. BOX 28

N.S.W.

Situation: South Creek Rd., Dee Why, N.S.W.

48 Cymbidium Champions



Arabella, Magnificent, H.C., A.M.
 Arebella, Waverley, H.C. (twice) A.M.
 Balkis Luath, H.C., A.M. (Sydney Show Champion).
 Carisbrook, Florence, A.D.
 Carisbrook, Plum (Early).
 Cassandra, Evadne, A.M.
 Cassandra, Toxteth, A.M.
 Celia, Tanandra (Prize Green—Early).
 Ceres, F. J. Hanbury, A.D. (twice).
 Ceres, Girrahween, A.M.
 Ceres, Westminster (special pink).
 Charm, Elegance, A.M., H.C. (Early).
 Cordelia Kuringai, A.D. (Colour Champion).

Cygnus, Janet (large, cinnamon).
 Cygnus, Opalescence, H.C.
 Dracolan, Haberfield.
 Esmerelda (Prize Green).
 Falcon, Illawarra.
 Flamingo, Allambi, H.C. (twice).
 Girrahween, Enid, A.M., 1st Class Certificate.
 Girrahween, Gloria, A.M.
 Gloriana, Tudor Rose, (The Champion Pastel Pink).
 Historian, Lindfield, H.C.
 Inca (White Pink. Excellent shape and texture).
 Ispahan, Mascot, H.C. (twice).

Janette, Golden Crown A.D.
 Joyance, Cinnamon, H.C.
 Joy Sander, Ruth, H.C.
 Joy Sander, Triumph.
 Louis Sander, Girrahween (A Champion Pastel Pink).
 Louis Sander, Kirribilli A.M. (twice).
 Miranda, Maisie A.M.
 Nirvanah, Warrigal, H.C.
 Peri, Good Big Yellow Lime Green.
 Plover, No. 1 (Excellent Green).
 President Wilson, Haberfield.
 Princess Elizabeth, The Giant.

Princess Margaret, Haberfield.
 Priam Ada Meech, H.C. (Twice).
 Profusion, Violacia. (Pink Champion).
 Promona Tanandra, A.D.
 Sandpiper, Pengilly.
 (Lovely Large White, Good Shape).
 Stonechat, Elouera (champion pastel green).
 Sussex, Laelia Sasso, H.C. (twice), A.D., A.M.
 Swallow, Conquest, H.C. (twice).
 Swallow, Daffodil, H.C. (twice), A.M.
 Swallow, Magnolia, H.C.
 Swallow, Soulangiana, A.M. (twice), H.C.

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS: Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS": Available free on request.

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Specialists in Australia.

37 Dobroyd Parade, Haberfield
 (Sydney), N.S.W., Australia
 (Near Mortley Avenue)

C. W. Bushell, Jr. UA5895, YX2531

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

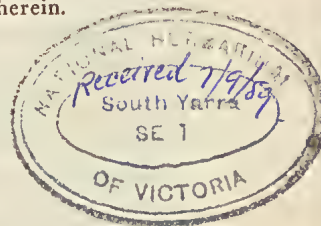
Australian Orchid Review

VOLUME 24

SEPTEMBER, 1959

No. 3

The author of each article is responsible for the facts and opinions expressed therein.



Contents

ARTICLES

Annual Shows—Dates and Locations	148
Beginner's Level— <i>J. N. Rentoul</i>	127
Brazilian Oncidium— <i>G. Hermon Slade</i>	138
Cultural Notes for Tasmania	142
Miscellaneous Orchids for Pleasure— <i>E. F. Moffatt</i>	123
Notes from Affiliated Societies	147
Notes from Interstate Societies	136
Over the Fence—"Jum"	134
Some Cymbidium Marketing Facts— <i>Samuel B. Mosher</i>	131
Some Easily Grown Coelogynes— <i>G. Hermon Slade</i>	132
Vanda Coerulea and Some of its Hybrids— <i>A. B. Porter</i>	141
What is New Under the Sun— <i>A. R. Persson</i>	119
Winter Orchid Festival— <i>F. Jones</i>	129

ILLUSTRATIONS

Cymbidium Judy	139
Cymbidium Sirius	139
Coelogyne barbata	140
Oncidium crispum	122
Oncidium Marshallianum	140
Oncidium Forbesii	121
Oncidium Nona	122
Oncidium varicosum	139
Oncidium Gardneri	121
Vanda coerulea	Front Cover

Hon. Editor: G. Hermon Slade, Box 13, Homebush, N.S.W.

Associates

QUEENSLAND:
P. G. Cran
Francis Tce.,
Taringa

VICTORIA
J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA
W. Harris
17 Old Belair Rd.,
Mitcham

WESTERN AUSTRALIA
A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:
F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

Editorial

• When we come to think over the various aspects of orchid collecting which form the basis of our hobby, we are apt to wonder what holds a grower's fascination when it is in a field quite different from one's own type of interest.

There are hobbyists who grow only *Cymbidiums*, others only *Dendrobiums*; there are collectors of "miniatures which can be grown in one-inch pots or less." Then, not only is the type of orchid the interest but the grower's special technique of culture.

Now what is it that so engrosses the hobbyist that his entire attention and interest can

be satisfied by such specialised interest? It is probably because through undivided study, they have been able to see new facets and unexplored interests that are not apparent to a superficial observer.

A microscope can open up a new world because it focuses our attention on a small area—too limited to be seen by the unguided eye. Yet what have those of us missed who have not seen a living, loving and ruthless community in a drop of pond water? How beautifully this was expressed by William Blake in his "Auguries of Innocence" . . .

To see a World in a grain of sand,
And a Heaven in a wild flower,
Hold Infinity in the palm of your hand,
And Eternity in an hour.

There could be a delight in telling others of our adventures into the unusual of orchids; what we find by confined and serious attention to our particular aspect of this extraordinarily diversified, largest family of flowering plants.

Our readers too, are curious to read of others' adventures and interests. They learn to identify a certain person with his specialised interest, so that both the specialist and the reader can gain in plants and friendship. "Wouldn't so and so enjoy this: It is one of his special interests!"—could be the type of thinking which would lead to a plant or a technique reaching the specialist to the advantage

of the sender and the recipient, perhaps even of us all.

The Australian Orchid Review invites those hobbyists with specialised interests to tell us of them. Describe the attraction in an easy open style, for with things small and specialised, the words "a conversational piece" are a cliché, so appropriate is the expression in conveying the attraction of the unusual.

We hope you will come forward with articles; these would delight our readers and other specialists alike. We are already promised several "conversational pieces", so think if there is something you would like to converse over. We hope to begin this section in our next issue.

What Is New Under the Sun?

A. R. PERSSON

• What is new under the sun? Nothing, of course. Or so I used to think. Now I am not so sure. So many mixtures of composts for Cymbidiums have been sponsored by enthusiastic growers that it would be difficult to think up another one. However, there is a new one that has the merit of being successful as well. The pioneer of this latest addition to the family of composts is Mr. G. Dent, Broadmeadows, Newcastle, N.S.W. Mr. Dent is known far and wide as an enthusiastic and successful gardener, who specialises in Iceland Poppies. As so often happens, the path to orchid culture leads through flower culture of other kinds. Mr. Dent frowns at poppies the size of cups; the size of saucers is more to his liking. Apart from consideration of many aspects of culture, Mr. Dent regards the rooting medium as of highest significance. From here he developed what may be regarded as a philosophy. He has grown flowers successfully for years, using orthodox methods of feeding the plants with fertilisers of various compositions. They were based on the well-known formulae of nitrogen, phosphorus and potassium in more or less balanced proportions. However, he observed that his garden failed to *continue* to produce ever larger and better blooms. In fact, a definite retrogression became obvious. His plants were losing vigour and stamina. Insect pests, pathogenic fungi and bacteria were taking an increasing toll. Do pests and diseases prefer sick plants to healthy ones? Of course they do. Why sick plants? Perhaps the trouble could be traced to the use of chemical fertilisers? This needs some pondering. Mr. Dent pondered. The result was a new slogan. No more inorganic or so-called "chemical" fertilisers. Never again. His credo is now based on *Organic Nutrition*. Animal manures, blood and bone, hoof and horn provide good nourishment. Dolomite might be regarded merely as a spice. The first half of the problem was solved. However, there still remained the problem of finding a basic material to which these morsels could be added. A material with the right physical properties, such as a reasonable permanence, loose for aeration, porous for drainage and a happy home for all the *useful* bacteria and fungi that inherit the earth for the benefit of plant life. It must be readily available in quantities and cheap. Perhaps *sawdust* would fill the bill. Of course it

would. Comes straight from Mother Nature. Nothing cheaper can be had for the asking. (But this state of affairs won't last when the orchid growers queue up at the saw mills any more than when they started to queue up at the tanneries for tan bark. However, keep composed; for back in the Big Australian Bush there are small mountains of sawdust built up during the last 50 years.) Mr. Dent experimented and developed a mixture and a technique which produces a compost which has proved wonderfully satisfactory for Cymbidiums. Mr. Dent is emphatic that Cymbidiums grown in it require *no additional fertiliser whatever*, either liquid or solid, excepting a handful of fine bone dust to a bucket of compost at potting time.

My friend W. Fishburn, of Ashfield, a Cymbidium grower of many years standing, has used this compost for some years with phenomenal results in number of spikes and flowers. Miss H. Jamieson, of Lindfield, is equally enthusiastic, even conducted a session on TV Channel 2 on the 4th inst. on this very subject.

Mr. Dent's garden flourishes. His poppies are bigger than ever, the stalks thicker and longer than ever before. Mr. Dent tells me that he is considerably bothered during the brief period that he sells poppy plants. The cars that queue up greatly exceed the space available in the street, so the traffic police have their hands full while his supply of plants lasts. Mr. Dent has put his spade away as an obsolete tool. Why dig the beds and suffer backache when they are so loose and friable that you can put your hand into the beds and plant the young plants anywhere at any time? While I believe that Mr. Dent's sawdust compost is excellent, I seem to feel in my bones that he is also a very successful poppy hybridiser.

Mr. Dent is generous. He gives his formula free to anyone who wants to grow flowers, including orchids, more successfully. (Some orchid growers might look inwardly and feel the satisfaction of emulating this generosity.)

His mixture is as follows:

1. 6 bags fresh hardwood sawdust.
- 6 double handfuls blood and bone.
- 6 double handfuls dolomite.
- 1 bag dry poultry manure.

2. Mix thoroughly, wetting sufficiently to make the whole batch moist but *not* wet. Store on *bare soil*.
3. Turn over once a week for 4-5 weeks. Thereafter once a fortnight. It is ready for use in four months and *not before*.
4. The mixture will heat up and tends to dry out. When turning add water, sprayed with rose, to keep the mixture moist. Heat rises to 140-160 deg. F.

As the conversion of the raw wood in the sawdust to food for plants is accomplished by bacteria and fungi, which is evidenced by the heat that develops, it is important the air and moisture is adequate. The mix should, therefore, be piled no higher than 30 inches.

To obtain best condition for the conversion of the sawdust, it is important the heap of mix be of adequate size. Mr. Dent recommends that *three batches, as above, be made up in one lot*. This makes a lot about 6ft. x 6ft. x 2ft.6in. Thus it will be seen that this compost cannot be made bucketwise. When potting add a handful of *fine* bone dust to a bucket of compost; this is important.

I will not need to explain that my first batch is brewing. I have successfully resisted every temptation to "improve" on Mr. Dent's formula. I may not always succeed, but I am determined to try this compost as it is to see its results without any complications.

Mr. Dent has read this story and generously agreed to its publication, and he adds:

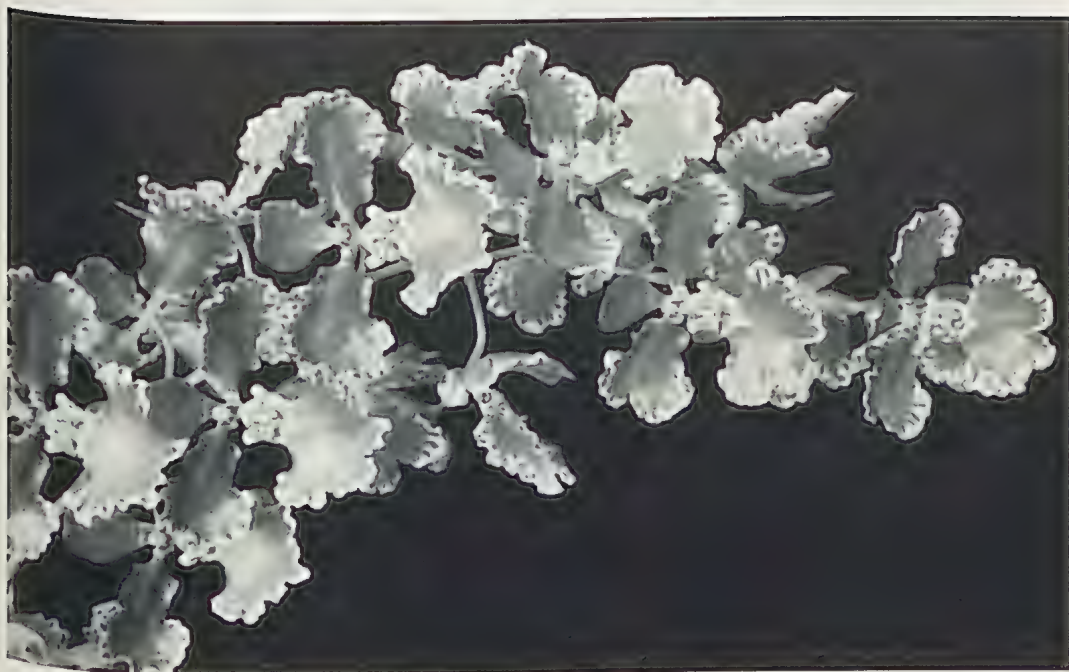
"When potting allow plenty of room for future growth. Do not pot in a loose manner, pack the compost as firmly as possible. Use *plenty* of water all the year round, never allow the compost to dry out. It is necessary to repot every 12 months—they grow so big."

Whilst this compost is decidedly hypnotic, I am still adhering to the view, expressed on many occasions, that, if you have a compost already which gives you all you want, then do not discard it. Do not allow yourself to be talked (or read) into a change. This advice does not in the least detract from the attraction of Mr. Dent's compost for I know so few who are really happy with their *Cymbidium* compost, nor am I happy with mine.

• **BY-LAWS OF THE ORCHID SCTY. OF N.S.W. LIMITED:**—Under the Articles of Association of the Society the Committee of Management is entitled to make By-Laws and these are, of course, directed for the government and good order of the Society. Members, of course, readily recognise that it is comparatively difficult to alter the Memorandum and Articles of Association of the Society and consequently provision is made for the governing body to make By-Laws from time to time and to have the power to amend and vary these as amendments or variations are found to be necessary. A sound administration is expected to keep very much abreast of current thought and opinion and is enabled to do this by means of these By-Laws. This, of course, does not mean that By-Laws are changed at the whim of any person or group of persons and that the responsible Committee of Management has to be satisfied that any proposed amendment is in fact desirable and in the best interests of the majority of the members and at the same time does not penalise or inflict a hardship upon any minority. You will readily see that By-Laws tend to grow up and mature with the Society and there comes a time when amendments have to be critically reviewed and

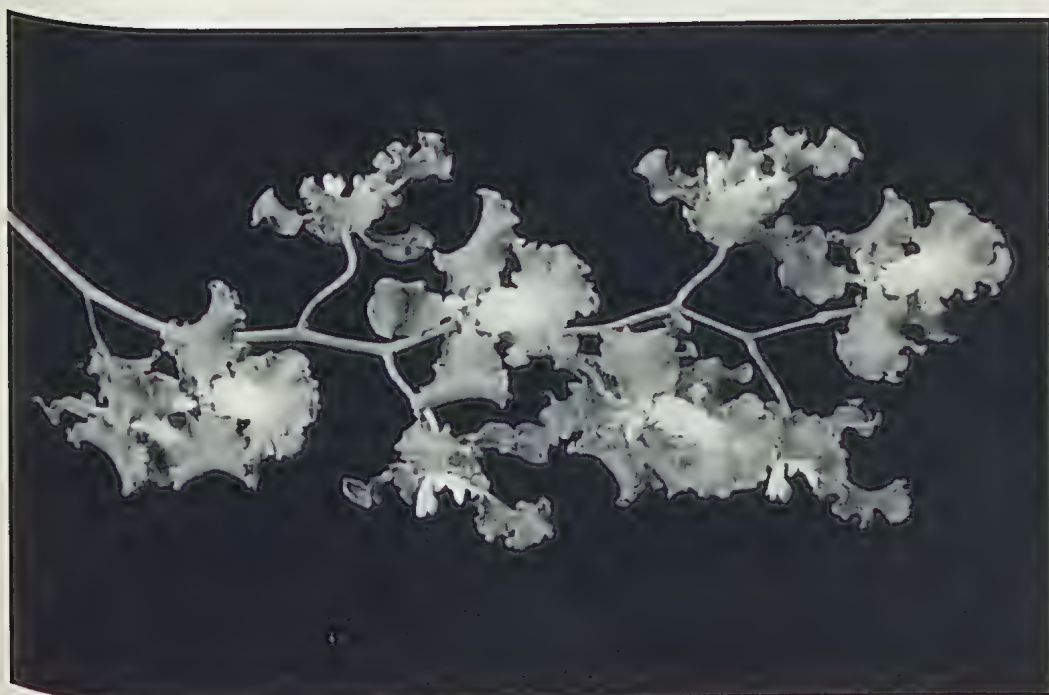
codified or rearranged so that they can be more readily referred to and so that they do not conflict with each other. Now this can constitute a very onerous task and this was so with our own By-Laws. The Committee of Management, realising that the By-laws as printed needed to have incorporated in them the various amendments that had been made from time to time, delegated this task to Sir Hugh Poate and the then Registrar, Mr. Norman Webster. These two men did a magnificent job in getting the By-laws into a stage where that commonly referred to creature "the man in the street" could read them and could be expected to understand them and the Society has expressed to these two men its appreciation for the very valuable work that they did in this regard.

For more abundant precaution the draft By-laws were then referred to the Society's Solicitor, Mr. Southey-Wilson, who made further worthwhile suggestions both as to arrangement and incorporation of further provisions and the Society is most grateful for the attention that Mr. Southey-Wilson gave to this matter. The By-laws were then circulated and reviewed by the Committee of Management, which adopted these By-laws at its meeting in April, 1959.



ONCIDIUM GARDNERI

Portion of inflorescence. Flowers in autumn. Native of Brazil.
Photo. G. H. Slade.



ONCIDIUM FORBESII

This species resembles *Oncidium crispum*, but has larger flowers on a less branched inflorescence and flowers in Spring. Photo. G. H. Slade.



ONCIDIUM NONA

This hybrid (*Oncidium crispum* x *O. varicosum*) combines the beauty of its two distinct parents. It grows outside, the more sun the better. Photo. G. H. Slade.



ONCIDIUM CRISPUM

A Brazilian *Oncidium* that grows in high trees in exposed situations. In Sydney it flourishes in full sun, withstands the Spring westerlies and revels in Summer north-easters. Flowers at Easter. Photo. G. H. Slade.

Miscellaneous Orchids for Pleasure

E. F. MOFFATT

Part II.

● So you still want to grow miscellaneous orchids? You are ready to scale the highest peaks? You have discovered that orchid shows take place either during winter, when the main crop of *Cypripediums* is flowering, or in the spring, when *Cymbidiums* are at their best? To participate in these shows it is necessary to flower some exotic orchids and have your foliage plants at their best. This can only be done if you possess a well designed hot house.

I would not advise converting the old establishment. Conversions are rarely satisfactory, and you will find that the cool glass house is a valuable adjunct to a heated house. Your great skill in diplomacy will be needed probably, to achieve a two-power agreement and so prevent a cold war on the home front. Tears at the thought of a shortened clothesline can be changed into smiles by the installation of a rotary space saver. Don't compromise like my friend who built his house around the old post. All pretence will be useless in trying to convince yourself that it will induce top ventilation.

A bi-lateral financial agreement to loosen the purse strings by adding a television receiver to your home comforts may also be needed, but be warned, this installation will give much satisfaction to the snail family as the evening torch parade will be abandoned.

This hot house can be constructed by using metal glazing bars and horticultural glass on a timber frame. However, if I was building again, I would use timber instead of metal glass holders. The advantages are (1) Better control of heat. (2) Less likelihood of leaks. (3) Easier installation of top ventilators. Whatever you do, make sure that the framework is robust enough to take your own weight on the roof when painting or repairing, and also the weight of many potted plants that will need to be hung from the roof beams.

The question of heat requires some early thought. Most experienced growers in the Sydney area agree that an average night temperature of 60 degrees Fahrenheit should be maintained when the outside temperature is below that level. In the daytime a temperature of 60 degrees F. can be expected on sunny winter days. The heating unit will only be needed for windy, wet and cloudy days.

In a small house of dimensions to 16ft. x 10ft., with a height of 8ft., there is no trouble to obtain sufficient heat from kerosene burners of the blue flame room heater type. Be warned, however, that the products of combustion from any oil heaters are suspect when allowed to mix with the air within the glass house. Sepal wilt of *Cattleyas* and withering of the buds on most orchids are likely to occur. If initial expense demands economy, you will put up with this type of heater, but eventually will be dissatisfied with its effects. A better arrangement, if you use kerosene, is to have the heater outside the house and circulate the hot water around or under the benches through pipes. pipes.

The best heating system for a small house is by electricity. Installation and consumption costs are higher, but it is worth the expense. Thermostatic control is essential and is simple with electricity. It saves the daily work associated with other fuels.

Whatever your heating system may be, avoid the mistake made by many, of cutting off heat when leaving for work in the morning. Even sunny days in winter can be quite cold until mid-morning. The temperature is critical again in the late afternoons. Considerable harm can be done in these short periods without extra heat. Perhaps the added comfort of a remote control unit for that TV will help ensure either mechanical or wifely assistance in the glass house.

I am sure that you will have piped water to your cool glass house. An extension into the new house is simple, but do not waste money by installing an elaborate system of sprays. Atmospheric humidity must be provided, of course, but in a small house of the size under consideration one nozzle is sufficient. If this spray is pointed down the centre of the house so that excess water from the fog will fall in the passageway, it can be left on during hours of sunshine.

Shading the house is a matter on which I can offer little help as situations and conditions vary too much. By experiment you can determine the degree of shade required for that part of the house. Last summer I tried a new paint for the glass. It provided more shade than previously used. As a result foliage plants and *Phalaenopses* are better than before, but Van-

das have missed flowering. As the new paint sticks fast, scraping will be necessary to find a balanced coverage for the winter months.

This question of shade leads to something which must be understood by the reader. The particular conditions regarding natural light and shade for my own house will influence my opinions. Almost overhanging the backyard is a huge concrete water tank which blocks direct sunlight from about 1 p.m. until later afternoon. As a result, I find that in the open, flowers associated with English gardens grow well, but sun lovers such as Australian natives grow poorly. In the glass house the chief effect is a much slower drying out process. I have to be very careful that water does not lodge in new growths and can only water early in the morning, except on very hot days or on days when there is a drying wind. The earthen floor is always wet so that atmospheric moisture is continually present. This is an advantage in summer but is dangerous in winter, as in building the house I omitted vents for top ventilation, hoping that by using metal glazing bars there would be sufficient exchange of air without too much loss of heat. This was a mistake, for I find that without special openings I have insufficient control of hot air in summer in the upper part of the house. The only ventilation available up to now has been through a few air bricks, each about a foot above ground level, and through adjustable louvres at the end of the house just above bench height. I will have to invent some means of regulated top ventilation as flower spotting can be very disappointing.

Another of my problems is overcrowding, and it is one which is common with most amateur growers. The close association of growing plants seems to help them, but when the collection consists of many genera each with its own cultural peculiarities, crowding is a limiting factor in the provision of the correct situation for each genus. This is particularly so in regard to light and water. This brings us to the crux of this article, i.e., where do I get the best results from each genus in my own particular glass house?

The collection consists of Cattleyas, Vandas, Phalaenopses, Dendrobiums, Cypripediums, Miltonias, Odontoglossums, Odontiodas, Coelogynes, Oncidium and a variety of foliage plants. Using heat and light as criteria the air space in the glass house can be divided into three strata: (1) The upper, which begins at approximately five feet from the floor and ex-

tends to the skillion roof. It is about 4ft. in depth on the high side and two feet deep on the low side. (2) The lower, which extends from the floor to a height of about 2ft. (3) The middle, which is in between the other two and has a depth of 3ft. One end of the house is more shady than the other, as a partition which separates it from the unheated portion breaks down the light. I will use these divisions to divide my remarks about the plants.

(1) UPPER SECTION

As a general rule orchids that have thick leaves like this hot upper stratum. Vandas are grown in slotted pots; these pots are suspended by wire from old piping that is supported by the roof beams. The pots contain charcoal, earthenware crock, lumps of treefern fibre, some tan bark and very few roots. Most of the roots are on the outside of the pots or projecting into the surrounding air. I position the pots so that the leaves are end-on to the light, and I take care that this arrangement is unaltered so that one side of the plant is always acclimatised to the heat from the sun. Sufficient drop from the roof is given to allow for future growth. This is something, of course, which can be adjusted at any time, but in a small crowded house it is not an easy matter to move plants about, and as my comments are directed mainly to those who have limited time to spend working in the glass house you will appreciate any time saving suggestions. The strap-leaf varieties are modern hybrid seedlings with plenty of *V. Sanderiana* in them. Some have already flowered and the remainder will give much pleasure in doing so over the next five years. This is a rewarding genus—hardy and easy to grow, with the obliging *Rothschildiana* unsurpassed. At the hot end of this section are some *V. Nellie Morley* seedlings, other semi-terete Vandas, and in pride of place *Renanthera Brookie Chandler*.

I feed these orchids practically every week, but discriminate between those with plenty of active root tips and those which may be taking a temporary rest. Organic and inorganic fertilisers, e.g., fish emulsion and Aquasol, are used alternatively and a fine spray is used to give them about twice the concentration recommended by the manufacturers.

Phalaenopses, which are in the same kind of pots and compost as used for the Vandas, are also hung from the roof beams in this stratum, but on the other side of the house where the sun's rays are not so intense. A single rigid piece of fencing wire is hooked into one side of

the pot to tilt it so that the plant hangs down out of the pot. They seem to like this tilt and, also, water drains quickly out of the tender growing area of the leaves. Extra shade is provided by a piece of hessian which is tacked to the roof beams above them. Their feeding programme is the same as for the Vandas. In such a situation and with plenty of moisture, these plants are easy to grow. This is particularly so with most hybrids that have white flowers. The pinks, which usually have mottled leaves, do not grow so quickly, and in my experience do not have anything like the extensive flowering period of the whites. If you wish to grow *Phalaenopsis*, start in the spring with healthy advanced hybrid seedlings with a white flower expectancy. Graduate to the pinks when satisfied you will be able to manage them.

The hot upper stratum also accommodates *Dendrobium* species which come from the earth's Torrid Zone, and hybrids bred from heat loving parents such as *D. phalaenopsis*, *stratiotes*, *undulatum*, *superbiens*, etc. These are placed on a narrow shelf which is built out from the sides of the house, consequently the plants are almost touching the glass. The *Dendrobiums* are on the sunny side, but show no signs of leaf burn. Growth is excellent, but the flowering of these beauties still presents a problem to me as usually the buds commence to wither prior to maturity. This trouble differs from the more common yellowing of the bud and consequent bud drop. In the latter case a fungus is the damaging agent and the cure is to eliminate the cause of the fungus. I am almost convinced that in my case the withering of buds is due to either or both of the following causes: (1) A delayed start in the new season's growth with a resulting attempt to flower too late. (2) A sudden drop in the temperature when the buds are maturing. At present I am blaming my heating system for the unsatisfactory results. I think that, with a better spread of hot air and a more constant degree of heat than I have been able to supply with a kerosene blue flame room heater, these *Dendrobiums* will commence their new growths earlier in the spring. The longer growing period should put more substance into the plant and an earlier flowering than is now the case might be expected. This refers particularly to *Dendrobium bigibbum*, *D. phalaenopsis* and their primary hybrids. More complex hybrids in the genus which should flower in the late autumn I expect to benefit even more so from a satisfactory heating system. To overcome such

a problem is one of the pleasures to be gained in growing a collection of miscellaneous orchids.

These hardwood *Dendrobiums* are grown in osmunda fibre, but as the pots are very small more roots are out of the pots than in them. Regular feeding is thus necessary, and when in active growth they receive the same treatment as the Vandas. Sealing of the root tips will indicate when the plants require rest. This is a variable period after flowering through winter to the spring, so discriminate, as some of the so-called antelope type have very little, if any, rest. When they are at rest, feeding should then be discontinued and water almost withheld until roots appear on the new season's growth.

I have found that this shelf in the hot area is also an excellent place for *Cattleyas*, which make up a new bulb before new roots appear from the rhizome. Here I also place other *Cattleyas* which I know to be without a strong root system. The position ensures a rapid drying out of the compost after watering, and thus there is less chance of root rot. Also, being above arms reach, water is not likely to be hosed into new leads.

The remainder of the *Cattleyas* are in either one of two other positions in the house. Young seedlings and plants which are building up are kept on the bench in the middle zone where there is more shade and conditions are damper. Plants which are at rest are placed in a reserved space on the bench where there are no overhanging pots and the position can be kept rather dry. The *Cattleyas* in all three positions are inspected regularly and moved to suit their condition. This handling of the pots has a secondary advantage in that they can be inspected for slugs and small snails.

All the *Cattleyas* are potted in osmunda fibre, and although this is considered the best medium here, I am not satisfied. I have found that growth is very good for the first year after a plant is potted, but from then on progress is mediocre. When fibre is used, one is inclined to put off repotting owing to the trouble involved.

This extended occupancy of the pot with a weakened food value in the broken-down fibre has convinced me that heavy artificial feeding should be given to *Cattleyas*. The light spray of Aquasol and the relatively weak fish emulsion which they have received weekly in the growing period has evidently not been sufficient, so I am going to feed more heavily by the use of fowl manure. My intention is to put half a handful of fairly fresh powdered manure on

the top of the fibre and water it in every day during the period of optimum growth. This may appear to be rather haphazard and most unscientific, but having had success already by doing this with *Dendrobiums* I feel sure that results will be as good with *Cattleyas*.

(2) GENERAL SECTION

The middle stratum is immediately above the benches, which are two and a half feet from the ground, and built out from the walls on three sides of the house. The difference in temperature between bench height and the upper stratum is relative to the season and to daily weather conditions. In summer the variation is considerable, but in winter the artificial heat which comes from below bench height makes the two zones almost one, as an even temperature can be maintained.

If you have visualised the glass house picture, you will see that about two-thirds of the bench space is beneath the orchids hanging from the rafters. It is an impossible job to grow orchids that are placed under hanging plants, simply because you cannot control watering, and also necessary light is lost. Foliage plants however, do not mind the overhanging water shower and relish the extra shade. Thus two-thirds of my bench space is given over to plants whose appeal is in a beauty of leaf. Closest to the glass where the light is strongest are a few *Crotons*, and these are highly attractive plants in the foliage section. Next to them are *Dracaenas* and *Calatheas* in many varieties. The *Dieffenbachia* family is well represented, with pride of place going to *Rocher's* variety. The striking colour patterns of *Marantas* make them indispensable, and where space is limited they are admirable because of their small size. In a bright section not overhung by plants is a small group of *Anthurium andreanum* with spathes of various colours. *Anthuriums crystallinum*, *papilionensis*, *Veitchii* and *Warocqueanum* are present, while *Philodendrons* are represented by several varieties. This later genus does best when the plants are given upright logs of tree fern fibre in the pot so that they can climb by attaching aerial roots to them. Be warned that most *Philodendrons* grow into large plants and are hard to accommodate in a small house; choose dwarf varieties. In spite of this I have been unable to resist the charm of *P. andreanum* and *P. varicosum*. These being vine-like, they can be trained around the log of fibre or allowed to go above the top of the fibre for some distance. This unattached portion can then be bent and brought down and attached to the base

of the log so that it will commence its upward climb again. In time the log will be hidden in a compact mass of strong healthy leaves. *Hedera canariensis variegata* is one of our most attractive foliage plants and does better if grown in contact with a totem pole of treefern.

There is an extensive field to choose from with foliage plants, but owners of small glass houses must be selective. Choose subjects which have attractive leaf markings and colours; if leaves are plain coloured choose those that have an interesting shape. One of my favourites is *Costus zebrinus*, which is very decorative in the autumn months. Most of the worthwhile plants require heat during the winter to be at their best as a setting for your orchids in the spring shows. However, *Dieffenbachias*, *Dracaenas* and *Marantas* are hardy and will stay attractive without artificial heat if placed in a warm spot in the cold glass house, or in a warm glassed verandah.

Propagation of foliage plants is easy and an added interest. Plants that become too large can be used for this purpose, and cuttings of the stem should be taken during the spring and placed in a container of moist sand. In a warm situation these will strike quickly and growth is so rapid that by autumn the young plant will be of sufficient size to be noticed and coveted by visiting friends. Your foliage plants will give greater satisfaction if knocked out of their pots each spring. Shake off most of the old soil and place in a size larger pot which contains a porous mix of leaf mould, sand and animal manure.

Two sections of the bench area are kept free from overhanging plants. Both sections are at the shady end of the house. One is given to *Cypripediums* and the other is reserved as a shady place for other plants which are resting.

I have not a great number of *Cypripediums* and only a few are of outstanding quality, but hope to improve this deficiency as the culture of *Cypripediums* is comparatively easy; they need little space and provide flowers when most other genera are resting. It is also possible to have such a range that some particular variety is in flower during each month of the year. The culture of these orchids needs little comment, but I have to admit that in the past I have had considerable loss of flowers owing to a rotting of the immature buds. This has been largely due to the fact that my house is slow to dry out. As the damage is usually done before the buds are noticed, I now take the precaution

Continued on page 144

Beginner's Level

J. N. RENTOUL

• It is not easy to climb back over all the obstacles surmounted in orchid culture, particularly after many years. Not so much a matter of ego to descend to beginners' level, either. Perhaps there are many things we would rather forget, but there are many things we should have remembered. Most of us can still recall with nostalgia the first orchids we saw, and it is this memory that remains the sole bond between us and the newcomer. In spite of all the years between and the experience, there is very little we can offer the tyro in the way of advice. He will go his way regardless and learn in time. Perhaps something will sift through his wilful mind, so this is for the beginner, even if all of it may not be so well carried out by more experienced growers. Like love, this is the time of year when the bug bites hardest.

People all over Australia and, for that matter all over the world, are every day of every week attracted by orchids as flowers and giving their culture the thought that is later transferred to active participation. For some it is hobby, but that would be a minority, as most of us one way or another try to retrieve some of our expense in maintaining the conditions necessary for their growth and flowering. To establish it as a business requires a great deal of work and a great deal of capital, and the success of the enterprise is at the mercy of fellow-growers just as much as at the mercy of a fickle or penurious public. It is well to remember those two things and develop them as the basis of business.

But before going that far there are a couple of other questions that demand answers. Perhaps first is the question: "What is expected of the orchids?" Then comes the real boner: "What is offered the orchids in the way of encouragement?"

The first is a matter of humanity, which cannot always be patterned, so we must try to fathom the dark recesses of the mind for an answer; the second is more a matter of latitude and longitude that can be answered with certainty, so while we have health and strength let's see what we can make of humanity.

The pure clear light that prompts so very many growers is that orchids are fascinating in their beauty, particularly Cattleyas. The beauty of Cymbidiums is more flamboyant because of prodigality of florescence, the extra-

ordinary range of colour and their prolonged flowering period. Unfortunately it is in Cymbidiums that visions of untold wealth are generated.

It is sometimes an unconscious effort to overcome an inferiority complex that prompts amazing expense which can convert even the psychopath in the long run to a happier frame of mind, even if his enslavement to orchids is utter and complete. To the broken-hearted they offer solace, to the escapist from everyday problems they offer relief. All this and more do orchids offer, but they never fulfil the lure that some see in hard cash . . . well, not today, anyway. If the visions of wealth are brought on by counting someone else's flowers at so much a flower, then a bitter awakening lies in store when the profit and loss account is personal, instead of someone else's.

For the ordinary Bill or Charlie there is a lot of fun, a lot of disappointment, a little profit or a little loss. At least Bill or Charlie do not ask too much. They like orchids, but not as enthusiasts of the moment. Theirs is a life-long attachment to orchids and the people who grow them.

So runs the human mind in its saner aspects. Naturally, the deeper you dig the darker it becomes, so let us play happily on the surface where orchid growing is rather innocuous even if a little mercenary at times. But what is crystalline is that if one does not ask too much of orchids they are prodigal in their returns. We expect flowers constantly; but it is not in many orchids to produce regularly in abundance, therefore, many of our early acquired plants should be discarded unless they are worth waiting for.

GROWING CONDITIONS

Latitude more than longitude must dictate *what orchids should be grown or what conditions should be provided* to grow orchids. These two impositions of latitude are as little appreciated by growers of many years' standing as by tyros. As a matter of fact, the older grower persists in poor culture after he should have provided something better.

It is always wise to select orchids that can be provided with a modification giving a little greater warmth than needed, so that for what some are pleased to call temperate growers a hot house is needed to supply the little extra

warmth over and above minimum required. And it is wisdom in elementary form to appreciate that orchids will grow as poorly in New South Wales as in Victoria, if they are not boosted up to what they need in the colder period of the year. The period when the boost is used may be briefer, but it is just as necessary. If it can't be given in some form then leave the heat-lovers where they are and concentrate on something less demanding. The answer is an all-round low of 55 degrees for temperate to hot growing orchids such as Cattleyas and Phalaenopses, which will suit Cypripediums just as well; provided they are given shadier conditions. In colder States a minimum of 50 degrees with a few slips lower is best for Cymbidiums. Prolonged lapses below these figures mean plant losses in Cattleyas, etc. and poorer and later flowers in Cymbidiums. That is what to expect, so don't ask too much of them. Outside these all-embracing statements there are exceptions in both plants and growers, but it is never wise to deal in exceptions of either; they are too unreliable.

THOSE NAMES!

The greatest affliction a new grower has to suffer is the labyrinth of names facing him. No such simple thing as "strawberry" or "parsnip" . . . no, m'lords and ladies, we must keep the atmosphere pure and medicated with a generous application of Latin simply because it is international. So it was begun, so it must continue. Time eases the strife of coping with them, and if just a little intelligence is devoted to the matter it becomes rather simple.

Nearly all the generic or plant names are constructed of one or more Latin words, though some are more Greek than Latin. All manuals and botanical dictionaries give the derivations, so surely it must be as much a part of a grower's education to understand and spell these words as to be able to grow the plants. A typical example of the way the names are built in Greek words is found in the *Zygopetalum*. "Zygos" signifies a bond or yoke, "Petalon" a petal, so that the combination of the two is made up to indicate bonded petals; and so they are—bonded firmly into one yoke at the foot of the column, or central pollen carrier.

When we come to the various members of the *Zygopetalum* family we again find Latin names to signify each member, such as *MacKayii*; or Mackay's *Zygopetalum* in free English translation. Other names signify the colour, the perfume or some outstanding characteristic. In man-made crosses whatever suits the whim

of the person naming the progeny or seedlings of that cross may be given; but to gain international recognition it must be submitted to and found acceptable by the authorities responsible in England. Don't be tempted by the novelty—the subject should be worth a name in the first place.

However derisively we may regard the names of orchids, once they have been recognised internationally they should be respected. Far too often, sometimes in wilful and continuing ignorance, sometimes in blatant cussedness, names are lost or contracted or mis-spelt. One is led to wonder if a similar affront were offered the individual concerned if he or she would show the same unconcern.

WHAT ARE THEY WORTH?

Most growers are apt to over-value what they like and devalue what they do not like, some more than others. It is poor story-telling to descend to clichés and smart sayings, but one very true saying in this regard will be valid for all time: "Beauty is in the eye of the beholder".

Not all of us like growing the same orchids or looking at the same orchids, so that a cross-section of orchid-growing "likes" at exhibitions and flower shows usually produces a variety in colour and form that has no sharp edges and corners; it is a well-rounded whole. But our likes must be very intimately related to what we can afford just as much as to the latitude where we will grow them. The only cheap ones are poor ones where orchids are concerned; but "poor" to one grower must be qualified by the trite saying in the upper part of this paragraph. Where one jaundiced eye is offended by a complete lack of form, another more perceptive eye sees the beauty of colouring when unrelated to symmetry. That is the one to buy. Let the old world take a few more turns, and one day the more shapely specimen will come along—if you still want it.

Whatever you do, don't be a slave to the supply-and-demand scarcity that forces prices up. Those days are finished unless you can buy the whole plant with no odd bits snicked off it. Remember, you are only a beginner; leave the high prices to those used to paying high prices. Probably they are better growers, too. When do you cease to be a beginner? When you can say *Renanthera Imschootiana* without batting an eyelid.

Probably the greatest asset for a beginner is concentration. Being able to sustain interest

Continued on page 142

Winter Orchid Festival of N.S.W. Orchid Society

FRED JONES

• This year the Winter Orchid Festival arranged by the Orchid Society of N.S.W. Limited was held on June the 25th and 26th at the modern showrooms of Messrs. Larke Hoskins Pty. Ltd., of William Street, Sydney. It was an excitingly different show, the lay-out and presentation being complemented by the modern decor and lighting of the showrooms.

The groups of orchids and foliage plants, also the trade displays, were staged from floor level and made a continuous and interesting display.

The Sub-Committee led by Messrs. Sasso and Lawler, assisted by Messrs. McKinney and French, is to be congratulated on the successful presentation of the Show.

The Cypripedium Championship of N.S.W., which carried a lovely trophy donated by Messrs. Shepherd and Newman Pty. Limited, was won for the second successive year by Mr. R. Mead with Langley Pride 'Laelia Sasso', a distinctly frilled and goffered variety.

Special mention was deserved by a magnificent display of Cypripediums on an area of approximately 10ft. x 4ft., arranged by Mr. R. Trenerry. Whilst some of the plants exhibited were of average quality, a large percentage were very fine indeed. Personally, I thought that the Judges should have recommended a Bronze Medal or a Special Recognition for this sterling effort instead of passing it by.

Other groups also were worthy of some special recognition, which at least encourages the exhibitor to compete next year.

A balanced group of Cypripediums was brought from The Entrance by Mrs. L. Smith; it was successful in winning the class for a Group of Twelve. Well done, Mrs. Smith!

The following notes are the writer's impressions of the First Prize winning plants, and also the larger of the groups exhibited.

Grand Champion Cypripedium. Langley Pride 'Laelia Sasso'. Mr. R. Mead. A smallish plant carried a large shapely flower. The dorsal white with a greenish basal area, the green being overlaid with red brown spots, the petals and pouch yellow green with brownish markings, the ventral green. The edges of the dorsal and petals were nicely frilled; in all an outstanding flower. Winner of the Shepherd and Newman Trophy.

Best Green or Yellow Cypripedium. Ansun. Mr. L. Sasso. A well grown plant with a medium sized rounded flower. The whole flower being a good clear green shade, except a slight white apex to the dorsal. A very attractive flower.

Best Red or Pink Cypripedium. Easter Hero. Mr. L. Sasso. A rounded and shapely flower. The dorsal was a reddish pink shade tipped with white, the petals and pouch reddish with the ventral green. A large bold flower.

Best Specimen Cypripedium. Insigne. Mrs. K. E. Thompson. A very large plant of this popular Indian species carried twenty-one flowers, which made an excellent display.

Best Maudiae type. Clair de Lune 'Edgar van Belle'. Mrs. K. E. Thompson. A large plant carried a huge distinct flower on a tall stem. The dorsal sepal white with green striping, the large pouch and the unusual petals were a yellow green shade.

Best Other Colour. Langley Pride 'Laelia Sasso'. Mr. R. Mead. The Grand Champion Cypripedium of the Show.

Best Group of Cypripediums. Mrs. L. Smith. A fine display with a total of twenty-five flowers in a varied and colourful group of quality flowers were included, Grace Darling, Hamish McLeod, 'The Grange', yellow and brown, Hancar x Toucan and Clara Gee x Roger Coulson, both green and yellow varieties, a beautiful Tearlath 'Margaret Ann', which served as a centre piece, together with Thule, Chardmore, Brandon x Spicerianum, all reddish varieties, also Magda a reddish variety with a white edge to the dorsal.

Best Cymbidium. Sirius 'Golden Dawn'. Mr. A. B. Porter. A small plant with an arching spike of eighteen large shapely flowers. Petals and sepals a golden shade with some brownish spotting, the lip cream with red markings. A very attractive and showy display.

Best Decorative Cymbidium. Sirius 'Golden Dawn'. Mr. A. B. Porter.

Best Cattleya. L.C. Hertha x B.C. Heather Queen. Mr. A. R. Persson. A medium sized plant with a single shapely flower. Petals and sepals a deep mauve purple shade, the lip darker with old gold markings in the throat.

Best Dendrobium. Louis Bleriot. Mr. L. Sasso. A vigorous plant with two spikes of

smallish shapely rounded flowers. Petals and sepals a deep reddish purple, the lip darker.

Best Vanda. Rothschildiana 'Rathmore'. Mr. B. Darcy-Smith. An improving plant with a magnificent spike of eighteen large flowers and buds. Petals and sepals a bright mauve with darker mauve tessellations, the lower segments are overlaid with a light brown suffusion, the lip is dark purple.

Best Other Orchid. Phalaenopsis Grace Palm. Mr. A. R. Persson. An arching spike of eleven large shapely flowers with buds just opening. Petals and sepals pure white, the lip marked with yellow and red spotting.

Display of Orchids and Foliage Plants. First Prize. Mr. L. Sasso. A nicely arranged and presented display of miscellaneous orchids together with a fine collection of varied foliage plants. Amongst the Cypripediums were Ansun, Easter Hero; both prize winners, together with the bold Warrior 'Green's', a shapely Tearlath and an attractive Grace Darling. A colourful Dendrobium Louis Bleriot (best in Show), with Zygopetalum Mackayii; an unusual species Epidendrum cochleatum, together with several colourful Cattleyas, Calanthes, Miltonias and a number of early Cymbidiums.

Second Prize. Mr. F. Slattery. A well presented display arranged with a large lacy fern as a background and various Crotons, Cordylines, Calatheas and Ferns. Early Cymbidiums were December Green, Egret, an off-white with reddish markings; the well-known Magog 'Jenny' and the yellow General Montgomery, with arching sprays of Wylan 'Sailor Bay' showing to advantage. The more prominent Cypripediums noticed were the white Lohengrin, a plum coloured Redstart and Morea x Ayot St. Peter, a bold flower in green and brown shades. A nicely rounded Vanda Jennie Hashimoto and several white Phalaenopsis added to the beauty of the display.

Third Prize. Mr. A. R. Persson. A fine group with several white Cypripediums, which included Snow Bunting, Lohengrin and Pavlova contrasting with the huge spotted Matchless 'Balmoral'. Amongst the Cymbidium seedlings raised by the exhibitor were several interesting forms of Charm x Isabelle Sander, an attractive Regal Castle, pink with a red marked lip, and Magog x Ramboda with two large showy spikes. The various miscellaneous varieties included Phalaenopsis Grace Palm and Laelio-Cattleya Hertha x Heather Queen, both best in Show, together with a dark mauve Vanda Waipuna and Laelia Desiree, a large

pink flower, also various white Phalaenopsis, Anthuriums, Foliage Plants and Ferns.

Other noteworthy groups included the following:

A magnificent display of Cypripediums by Mr. R. Trenerry created a fine spectacle and showed what can be done with a cold glass-house. The more prominent varieties noted were Anita 'Compactum', Diana Broughton, Nell Gwynne and Cupidon in the yellow and green shades. The spotted types included Winslow 'Verlie', Draco, the bold Warrior 'Green's', Balaclava and Matchless. Amongst the reds, Lochinvar, Koritza, Alderman and Eventide stood out. Various Cymbidiums used as background were Magog 'Rose Meech', pink, a reddish Sunset and Magog 'Princess', with an excellent Zygopetalum Mackayii as a centre piece. This exhibit was finished with dozens of pots of ferns, which were arranged amongst the Slippers.

The Norfolk Nursery (J. McKinney) presented a nicely arranged group of various orchids with excellent foliage plants and ferns. Early Cymbidiums included Lucy 'Porter's' with two large spikes, a distinct Sapho x Ralph Sander, with yellow and brown flowers, Wylan 'Sailor Bay', together with General Montgomery. A large intensely coloured Laelio-Cattleya Sam Soya served as a foil to the Cypripediums, Golden Fleece, C. Golden Mohur yellow and white, Warrior 'Green's', the yellow Round Head and the distinctive Maudiae Magnificum. Various colourful Anthuriums, distinct Philodendrons and Peperomias, with Crotons and Ferns made an excellent display.

Mr. R. Mead exhibited a fine group of Cypripediums, which included: Firebrand 'I. W. Read', with a white spotted dorsal, Selenia, fine variety a distinct yellow shade, Coningar, a lovely spotted rose dorsal, a Matchless 'Marilee' with two shapely flowers, Bonita, a large showy flower and Momag, with large brown spots on a green dorsal.

A group shown by Mrs. Hayter included Allure, a bright reddish shade, Grace Darling, yellow and white, Wenbourne 'Christine Read' reddish, Pyramid x Nitens, together with a fine plant of Astra x J. M. Black, with three showy spotted flowers.

Wondabah Orchids (L. Giles) created great interest with a display of Cymbidium Sirius seedlings of their own raising. A number of plants with arching spikes of clear green flowers with red brown spotted lips made an excellent

Continued on page 146

Some Cymbidium Marketing Facts

Extract from "Cymbidium Society News"—July issue, 1959

• Recent articles appearing in orchid magazines regarding low prices received for Cymbidium flowers have left the erroneous impression that large growers have flooded the market with top quality flowers at reduced prices and consequently jeopardised their position with small growers who have paid good prices for plants with good commercial value. We would like to correct this misinformation.

The Dos Pueblos Orchid Company is probably the largest of all cymbidium flower shippers, with sales of many, many hundreds of thousands of flowers. This large quantity of flowers has been sold to nearly 500 wholesale buyers scattered over the entire United States and Canada and consequently we are probably in a better position than others to know the market.

The past Cymbidium flower marketing season just drawing to a close has been by far the most successful season we have ever experienced in our ten years of marketing. The demand has been the greatest we have ever known and the prices as high as in previous years and prices have remained firm throughout the entire season. Since all of our flowers are sold at our posted prices we are glad to list them here. They are as follows:

Size Fancy Flowers \$1.25 to \$1.50 each

Size No. 1 Flowers \$1.00 each

Size No. 2 Flowers .75 each

Size No. 3 Flowers .50 each

Size No. 4 Flowers 33 $\frac{1}{3}$ or 3 for \$1.00

All of our flowers shipped are of prime quality so that every flower can be used by the buyer. All spotted, defective or damaged flowers are removed from the spike before packing and are destroyed.

We have in addition eliminated from our growing ranges all flowers smaller than No. 4 and all muddy coloured and unattractive types and those varieties that will not hold up in shipment. We have also found that to produce the highest quality and longest lasting flowers we must be extremely careful in our growing methods. We have found, for instance, that an excess of nitrogen will cause soft and floppy flowers which do not hold up in shipment. Also, we have found that if the flower spikes are allowed to get too dry they become hard and woody and after cutting will not take up sufficient moisture to keep the flowers firm, and

that such spikes will not ship. We have also noticed a great improvement in the quality of our flowers since we have installed electric fans and excelsior moisture evaporating pads to pull cool moist air through our growing ranges. This has resulted in the flowers opening more slowly, lasting longer in good condition on the plants, and in production of a much higher percentage of perfect blooms.

The greatest total demand is for sizes Nos. 2 and 3, although we have never been able to supply the demand for the Fancy and No. 1 size. Our total shipments average between No. 2 and No. 3 prices.

In addition to the prices paid as above, the buyer pays the entire air freight bill, all flowers being shipped air freight collect, and also pays a packaging cost which covers cost of box and labour of packing.

The above posted prices thus become the net price received by us f.o.b. packing house.

We do not ship any flowers on consignment or commission, but only on order at the posted price. Thus, it is impossible for our flowers to be resold at reduced prices or to cause a glut in the market.

Now, what has caused the dumping of thousands of Cymbidium flowers at very low or no price during the past season? The answer is simple. The shipment of flowers on consignment, and the shipment of inferior flowers and poor grading and packaging. The consignee who receives three times as many flowers as he can sell and in addition has to deduct the expense of regrading and packaging often turns part of the shipment over to a second consignee, who also takes a commission. After regrading and dumping of inferior flowers the remaining excess over demand is sold for anything any buyer will pay. We know of many instances where commission consignees have received shipments of unwanted flowers from unknown shippers without any previous arrangement or understanding and the flowers were dumped without opening or returned unopened.

Until a grower realises that growing flowers is only half of the problem and that the marketing is just as important, he will never realise the prices he should receive. Many growers already know this and have developed stable markets for quality flowers and are receiving prices comparable to ours.

This past season we have sold many thousands of flowers to growers, both on the East and West coasts, who have developed market demand in excess of their own supply. Since they have paid our posted price, plus packaging and freight, they are obviously receiving at least as high a price as we receive.

It may be that groups of small growers who are raising quality flowers could group together and with rigid grading standards could develop their own market without resorting to consigned shipments. By combining shipments small growers would also have the advantage of a sufficient supply to take care of the variety of sizes and colours needed by a buyer, or it may be that smaller growers could make arrangements to market through a larger grower who has already established a stable market.

Dos Pueblos is already marketing the flowers of a number of smaller growers in the Santa Barbara area to the satisfaction of all concerned and this might well be done in other areas.

The upgrading of flowers is an absolute must if a grower expects to receive a fair return for his flowers. The old muddy coloured and small

fragile flowers of a few years ago have no value whatsoever in the market today.

I would also like to mention a word in regard to colour demand in Cymbidium flowers. A number of writers have recently suggested that the light coloured and pastel shades are going out of style and the deeper colours are in greater demand. This is completely contrary to our experience. By far the greatest demand of all is for white flowers or those of a faint blush tinge of pink. Then next, the pastel shades are in greatest demand and the last demand of all is for the deeper coloured flowers—probably not more than 1 or 2 per cent.

To briefly sum up the marketing situation, in our opinion there is no other alternative, if a grower expects to receive a fair price, but to produce high quality flowers, well grown, marketed to reliable buyers at posted prices, and the elimination of all consignment sales. Furthermore, the shippers must have a rigid standard of grading that every buyer can depend on, so that the buyer will know in advance what his shipment will contain when he places the order.

—Dos Pueblos Orchid Co., Goleta, Cal.
Cymbid. Soc. News—July issue, 1959.

Some Easily Grown Coelogynes

G. H. SLADE

• Many Coelogynes grow luxuriantly under similar conditions of light and ventilation as Cymbidium hybrids are grown, a few Coelogynes can be included to provide a readily grown and easily managed group of attractive orchids.

There are about a hundred species of Coelogyne, many of them either small flowered or requiring tropical heat, however, the following grow easily and have relatively large and attractive flowers.

Sir J. D. Hooker in "Himalayan Journals", Volume 1, p. 100, remarks, "On the ascent from Darjeeling the straight shafts of many of the timber trees are literally clothed with a continuous garment of white flowered Coelogynes which bloom in a profuse manner, whitening their trunks like snow."

The same species when cultivated lend themselves to pot, basket, or fibre clock culture, so that a singular floral beauty can grace our bush houses.

COELOGYNE BARBATA (Illustrated)

A rather large plant with somewhat distant pseudo-bulbs which are two inches high. The large shapely leaves are about 18 inches long, between which a slender wire-like inflorescence develops which is surmounted by scaly bracts, between which the buds develop. The erect peduncle takes many months to develop, starting in September but not blooming until May-June. The flowers are pure white, three inches in diameter with a large lip marked with sepia and fimbriated with blackish hairs. It is an unusual and worthwhile bushhouse orchid. A large pan or basket is a suitable receptacle.

COELOGYNE CORRUGATA

(Syn: *C. nervosa*)

A plant with much wrinkled pseudo-bulbs sending an erect spike of 3-5 flowers with the young growth. The blooms are 2½ inches in diameter, milk white, with bright yellow marking on the labellum. Suitable for pot culture.

COELOGYNE CORYMBOSA is an ascending species similar to those observed by Sir J. D. Hooker. A block of fibre suits it admirably, when its graceful leaves 8 to 10 inches long form an attractive setting for the numerous pure white perfumed flowers which are up to 3 inches in diameter and are perfumed like our native *Boronia serrulata*. An attractive Indian species.

COELOGYNE CRISTATA is so well known that scarcely any description is necessary. It exists in compact and in rambling forms, both are attractive; the former is suited to pot culture, while the latter display themselves best when spilling over a hanging basket. There are several varieties, *cristata alba*, which is particularly rambling; it makes a delightful basket subject; it has been described as the "purest white of all orchids".

Variety *Lemoniana* has a lemon colour on the labellum instead of the orange of the normal form. It is an attractive addition to an interesting group of a fine orchid species.

COELOGYNE ELATA is similar in growth to *C. barbata*, but is more rambling and of larger size. It flowers in the same manner, taking months to develop, to produce a scaly inflorescence of intermediate sized white blooms with yellow and orange markings on the lip. It should be grown in a large shallow pot or a long piece of treefern. Although rambling, it is attractive in bloom.

COELOGYNE FLACCIDA is a clustered plant with angulate pseudo-bulbs carrying 9 inch leaves in pairs. The flowers, which appear with the young growths in spring, are white, on pendulous racemes of 10-15 flowers. It is easily grown, but likes more sun and air than some of the other species.

COELOGYNE MASSANGEANA. A well known easily grown orchid which flowers at various seasons. The pseudo-bulbs are clustered, surmounted by two large stalked leaves 20 inches long. The completely pendulous flower spike develops rapidly from the centre of the young growth to produce a drooping raceme about two feet long of numerous 2½ inch buff yellow flowers with brownish labellum. It is an easily grown attractive species suitable for basket culture.

COELOGYNE OCELLATA is similar to *C. corymbosa*, but is a smaller plant with two inch flowers. The name is derived from the eye-like yellow-brown markings on the labellum.

COELOGYNE SANDERAE. An attractive species related to *C. barbata* and *C. elata*. It is smaller than either of these plants, but carries an attractive wire inflorescence of white flowers marked with orange yellow on the labellum. It is attractively perfumed and is suited to pot culture. It should not be confused with *C. Sanderiana*, which is a tropical species.

COELOGYNE SPECIOSA. This is a rapidly growing species, quickly producing a specimen plant. It has clustered ovoid pseudo-bulbs each carrying a single leaf. The flowers appear almost continuously, although they do not make the display of many of the other species. They are worthwhile because of their size and ever presence. The bloom is yellow-brown with broader sepals than petals, the lip is large, pale brown marked with deep brown with a pure white front lobe. A magnifying glass will reveal the exquisite beauty of the hairs composing the fringe. They are crystalline and peculiarly branched.

Other Coelogynes can be tried as many as are amenable to culture. They like a peaty Cymbidium mixture. A golden rule is "Never repot unless necessary." No orchids resent repotting more than Coelogynes. Try every trick to keep them in the confines of their receptacle short of repotting. If the pendulous forms like *C. cristata* are allowed to droop over, so much the better, for they then flower best. Ascending growers like *C. corymbosa* or *C. elata* can be affixed to a new fibre block without disturbing the roots by tying the old piece to the base of a new one.

Coelogynes flower over much of the year, but more bloom in spring than in other seasons.

Although they are spread from the Northern Himalayas through Malaya, Java and New Guinea to Samoa, none has yet been found in Australia.

• "COOKTOWN" ORCHID WINS:—An orchid has been chosen as Queensland's official floral emblem.

Following a poll conducted by Brisbane's morning daily newspaper, the Queensland *Dendrobium phalaenopsis* (or Cooktown Orchid) has been endorsed by the State Cabinet as Queensland's floral emblem.

Legislation will be brought down later in the year giving effect to Cabinet's decision.

In the newspaper poll, readers had 10 plants and trees to choose from, but they gave an overwhelming vote to the Dendrobium.

Over the Fence

"JUM"

• "Hello, Charlie, haven't noticed you about lately. Where have you been hiding?"

"Well, Frank, what with one thing and another and the house needing painting I had a busy time getting ready to repot all my plants this year, by eight o'clock I just couldn't keep my eyes open. I skipped a few meetings. Can't say I missed much from the look at the programmes."

"That depends, Charlie, on how interested you are; first of all, there's nothing like a poor flowering season to tone down enthusiasm. Some years I get ashamed of my stuff, and because I don't feel like taking it along to the meetings I often skip a few myself. But often it seems that I am wrong and what I looked on as a collection of junk would have measured up all right when it was on the bench with the other stuff. Whether the judges would have . . ."

"Don't bring the judges into it, Frank. I can get into all sorts of bother without mentioning the judges. Look what they did to my . . ."

"Okay, let's skip them, Charlie. It's a nice day and I don't want to get all steamed up over something that's over and done with."

"Yeah, that's right. Let sleeping dogs lie . . . You know, one thing struck me this year when I was repotting the early ones Frank, and that was all the trouble we go to when the potting season comes along—compost and pots and rubbish and bits of plants all over the place, and then when I got one bench all set up there was a crash and about twenty plants all over the place. The bench was rotten and I meant to fix it, but put it off. Why don't we grow them in beds like they do down at Dos Pueblos and a few other sensible people? Just plant them like Geraniums and the rest of the garden things. After all, most of my backyard is covered. I wanted to extend a bit this year, but when I suggested to Mum that we take down the rotary clothes hoist and put in a gas or electric dryer she hit the roof and said not for any old orchids. So I just had to thin them out a bit."

"Why don't you try a couple of beds, Charlie? Pick out the early ones, put half of them in a bed and pot the other half in pots. You'll get more flowers from the plants in pots for a year or two, but at least you will be able to

forget the beds for four or five years."

"That may be all right, Frank, but what Whatsisname had in the Review June issue put me off. I had thought about it quite a lot."

"You don't want to take too much notice of what all these jokers write in the Review, Charlie. What may not suit their backyard would be fine for a lot of other people with bigger backyards in another State. Provided you follow the rules and don't get sluggish there is no reason why you can't cut plenty of flowers for the early crop. After all, that looks like the best proposition from now on. A lot of the later flowers probably don't suit bed culture and anyway, I would hate to dig up a plant of say, Dorchester 'Jeanette' to take to a show or a meeting. It's hard enough to get it moving sometimes as it is. But I reckon that the most important thing would be to give the plants in the beds plenty of tucker to spur them along."

"You're dead right about the tucker, Frank. You know, it's a funny thing how ideas change. When I started growing Cymbidiums the old-timers used to say 'Fertilisers? No, whatever you do, don't give them fertilisers. You won't have any plants left if you start on that sort of nonsense.' They were a canny pack of old stagers, though. Most of them used to go home and get stuck into the blood and bone and superphosphate and chook manure, and it took us a lot of years to wake up to them. Look what Sid Cooke did with chook manure last year—Balkis 'Luath', did you say? We've never seen better, and Sid made no secret about what it was done with . . . No, Sid Cooke, I said—you've got that other feller on the brain. It's a nice day and we don't want to get all steamed up about anything. You were right a couple of years ago when I was using the wrong fertiliser or the right fertiliser with the wrong sort of treatment. You know, I reckon the best way for us busy people is to put the fertiliser in the compost and let the water do the work. It doesn't matter if the plants or the pots or the beds dry out the way they did when I got on to that super liquid booster. I didn't know much about the theory but I sure learned the hard way. And then the judges had the nerve to say that I lost out because my flowers had no texture. I sure boiled over that day. Those judges . . ."

"Don't bring the judges into it, Charlie. It's a nice day and I don't want to get all steamed up either."

"No, that's right, Frank. Let's get back to the fertiliser. I lost a few buds on the early ones this year, and old Slat's said it was the glass house. Well I hadn't had much experience of a glass house for pushing the flowers about up to them, and I thought it might have been a bit of an overdose of fertiliser. But I finally wised up to that old robber down at the corner. He was selling poor quality kero instead of the best. I paid top prices both ways. The fumes were loaded and that's what knocked the buds off the stems so fast. Plenty of fresh air and good kero was most of the answer. Anyway, I don't think Cymbids need any heat boost at all here, but they need plenty of fresh air even when they are sheltered. I often wonder what happens when the plants get a real overdose of tucker. I suppose the best way to find out is to slap a very liberal dose of manure into a potful of compost and let it work it out for you. Up to now I seem too busy dodging other things to try it."

"Why go to all that trouble, Charlie? I can give you the answer now. But I'll go the long way round with the story. Quite a number of growers graduated to orchid growing from other branches of flower cultivation and horticulture. Now, most of the flower growers were used to what we call 'forcing', which is a lot different from fertilising. This can be done in a number of ways, but it always more successful with annuals than with perennials. It increases flower size and sometimes advances the flowering season slightly at the same time. Most of the canny converts transferred these ideas to the orchids they grew and had enormous success. They took most of the prizes and everyone said aren't they wonderful, how do they do it. You've seen it, Charlie, the same as me. But most of the gullible folk never bothered to look at the plants too closely—they were dazzled by the magnificence of the flowers. If they had stooped a little lower and had a look at the bulb size on the Cymbidiums and the leaf texture they would have been a bit dull if they couldn't see anything wrong. The leaves are just a little too yellow-green for my liking, and where the bulb should be enormous for the quality of the flowers it was just ordinary. The suckers rushed round trying to buy pieces and if they were successful in getting a bulb they usually finished up paying top price and having it die in their hands."

"Why? Well, Charlie, it's like this. Forcing is all very well for annuals, as I said a while ago. The plants can be put in the incinerator or turned into the compost heap when the flowering season is over. A Cymbidium plant even when left entirely untouched after 'forcing' seldom does as well for the next three years. It takes all that time to recover. It can't be forced again next year. And when it is cut up into single bulbs for sale it's you, Charlie, and a few of the other jokers who pay for nothing. Even if you do get a leaf to stay on that bulb it will be many years before you get a plant worth looking at. You've got to think of a lot of things in this game, but I suppose the first is to always go to someone reliable for the bits and pieces."

"I don't know about you, Frank, but tell me where I'm going to put another plant in this dump. I reckoned I had all the prize-winners about four years ago, but what with all the high-pressure salesmanship and promotion going on at present, I find I'm a back number. What hope have I got of ever getting a championship with a collection of has-beens. In a couple of years the judges . . ."

"Lay off the judges, Charlie. I told you . . ."

"Sorry, Frank, but you know how I am. But I can't just keep buying plants and throwing the old ones away, can I?"

"No, that's so. But it may take some years yet for things to settle down. I would say that the overseas flower market is good for a while. The surest indicator on that line is Wall Street. Brother, when Wall Street slides down the hill you can pack the lot up and put them in the incinerator as far as getting anything out of them goes. It's orchid-growing for fun then or not at all. And as far as I'm concerned, Charlie, I'll do then what we should have been doing all along—I'll go over them with a garden rake and keep about fifty of the best. And then I'll take the tops along to the meeting, and there'll possibly be a dozen or so jokers there and no judges . . ."

"Lay off the judges, Frank, or . . ."

"Okay, Charlie, okay. But we haven't got there yet, and at the moment I get enough out of it to pay for a few things that I wouldn't get otherwise. A lot of it goes in upkeep, and I guess when I go over the books I break about even. I'd never give it up, whatever happens . . . Oh, good morning, Mrs. Wilson. Nice day, isn't it?"

"Good morning, Mr. Wright—your wife is on the phone and asked me to tell you she's

waiting to cook that meat for dinner. It is a nice day, but if you want to live to see it through you'd better get going. Helen sounded very cross."

"Okay, okay. See you later, Charlie. 'Bye, Mrs. Wilson."

WINTER CULTURE IN WEST AUST *CYMBIDIUM*

• When the weather becomes milder towards the middle of April, plants that were dormant during the hot summer months will now commence active growth and all flowering size pots should be put out in the open, protected from high wind, but full morning sun, if possible. Winter sun will not harm the foliage or bulbs. All the light possible is required during the growing period for successful flowering. Small plants and back bulbs need more protection. Plants grown in the shade will make rank growth, and the spindly development will not flower. If the pots are placed on the ground near trees, constant care must be exercised to prevent the tree roots from entering the pots through the drainage hole. A small cup shaped hole in the ground under the pot will minimise tree root trouble.

It is not advisable to remove back bulbs in autumn unless artificial heat is available, as the majority of them will not move until spring weather arrives, and being dormant during the winter are likely to rot.

Early autumn is a good time to repot if the plants need it. This enables the new growths to get their roots well into the compost and grow on through the spring without disturbance—thus being well established before the summer heat arrives; whereas the same plant repotted in the spring has just settled down when the struggle against excessive heat commences, delaying the growth with the possibility of it being too immature to form a flower spike. Unless the growth has started to swell at the base to form a bulb, do not expect it to flower until the following season.

It is advisable to discontinue night watering about the end of March, keeping the plants at their driest for the coming cold nights. It is not a wise policy to "monkey" with the protective husks or basic leaves of the bulbs looking for spikes—premature exposure of the younger tender spikes to the elements can do nothing but harm.

On March 15th this year Perth experienced a 42-mile-per-hour north-easterly, with a maximum temperature of 105.6 deg. F. Under such

conditions any young growth with the husk pulled back would probably be blasted beyond recovery.

When the flower spike has developed enough to come into contact with the foliage, give the plant full protection from wind to avoid damage to the spike through constant bumping by the leaves.

Frequent applications of liquid manure after watering will be beneficial, but it is far better to have it too weak than too strong, ever remembering that you build up a plant, but you cannot resurrect its foliage, when the roots have rotted, which will almost invariably follow over-manuring. For best flowering results see Mr. F. A. Stewart's article A.O.R., June, 1958, p. 89, but if you use poultry manure in W.A. as recommended you must expect a pot full of back bulbs, for what applies to California and Sydney in that respect does not apply to Perth. If a plant becomes dormant when the pot contains poultry manure, the roots immediately start to rot.

CYPRIPEDIUM

With the exception of the summer flowering varieties, the autumn and winter months are their most active periods. Repotting should be done as soon as possible after flowering. Overhead watering should cease about the end of January and, as the weather gets cooler, water only in the morning. Should water lodge in the axils of the leaves it must be removed to avoid the newly-born flower bud from rotting. Many buds are lost before they are seen through neglect to remove this water. The best method to remove it is to get good thick blotting paper, cut it into oblongs about 5in. x 3in., then bisect the pieces into two triangles by cutting them diagonally from corner to corner. Insert the right angle well down between the two top leaves—the top leaf will prevent any injury to the bud, and the water will be removed far more effectively than by poking the point of the blotting paper down on top of, or alongside, the bud.

A good watering once a week is ample during the cold weather, if plants are grown in a glass house, but they must never be allowed to get too dry.

DENDROBIUM

As the growth is usually completed when the cold weather arrives, care must be exercised, and the plants kept on the dry side. Full sunlight through June, July and August will not harm them. If they are kept in a glass house the new growth will probably rot if the atmo-

sphere is stagnant. It is recommended that they be placed outside in full sun, but protected from the rain and cold winds.

CATTLEYA

Practically all of this genus can be grown successfully in an unheated glass house in W.A., provided care is taken to keep the compost open, and discretion is used in watering. They require very little watering in the winter months, when our climatic conditions are frequently 100 per cent. humidity. If the plants are winter flowering, it is best to bring them inside the house at night once the leads emerge from the sheath, as the high humidity in the glasshouse will cause spotting, which is invisible to the naked eye, but will manifest itself as the buds develop. Covering them at night in the glasshouse will certainly prevent drip, but it is usually the high humidity that does the damage.

MISCELLANEOUS

All the Aspidistra-like leafed varieties such as Phaius, Stanhopea, Lycaste, etc., must have good ventilation. High humidity in still air will rot the leaves. A pot full of bulbs with a flower spike standing up amongst them is not nearly as effective as a plant carrying healthy foliage.

It is suggested that 90 per cent. of plant losses is due to overwatering in the winter months. Practically all the orchid genera will survive without watering for six or seven weeks during the cold winter months in W.A., and although this practice is not recommended it is quoted to emphasise that too little is far better than too much.

Perhaps our greatest winter problems are slugs and caterpillars. There always seems to be a few that will not take poisoned bait and are unaffected by sprays. Cotton wool impregnated with Pestoxal or any good deterrent seems to be the most effective preventative. The wool wound around the flower stem like a bandage is not nearly as effective as when it is teased out into a disc similar to the metal discs we see on ships' mooring ropes to prevent rats using them as a means of entering or leaving the ship.

Practically all other glasshouse pests can be eliminated or minimised by spraying with white oil and malathion, which will also give the plants a nice healthy appearance.

SPRING CULTURE IN QLD

• Spring is perhaps the most important time in the life of the orchid grower, for it is the

time when the vast numbers of autumn flowering plants are starting their growth cycle.

Upon the care and attention they receive during the spring and the following months depends the quality and quantity of the blooms in the flowering period to follow.

All Dendrobiums, with the exception of those of Indian origin, and some of the Cattleyas are now starting their new growths; many of the species Phalaenopsis will still be carrying blooms; Vandas will be continuing their growth; Cyripediums not flowering (those which should have been potted in the winter) will be growing vigorously; Cymbidiums will have strong new leads.

In caring for Dendrobiums during spring, bush house conditions should be such that air movement will be constant without actual draughts. Should this not be so, steps must be taken to correct the lack of ventilation.

This may be done by the fitting of a gauze screen door outside the existing one, which will prevent the entry of insect pests when the inner door is open.

Should the air still be stagnant, a ventilator hinged to the back wall of the bush house should be provided.

This will allow the free movement of air throughout the house and so prevent damping off of new growths, leaf spotting and leggy growth.

In the glass house, the treatment will be similar—bottom ventilators being adjusted each morning and evening until satisfactory growing conditions have been reached.

All plants requiring attention — repotting, back-cutting, etc.—should have been sorted out and placed in a special area away from those in good growing condition. A special check should be made to see that the plants put aside for attention include those with compost which, although it looks good on top, may have broken down and be retaining too much water.

All the necessary "bits and pieces" — new pots, tools, composts, labels, plastic string and stakes — should be on hand for the busy time ahead.

Remember — the grower has little time in which to carry out his tasks, for with warm weather, growth is rapid once it has started.

A plant neglected at this important stage in its growth cycle quickly goes back; it takes much longer to return it to first-class condition, and flowering stage, than the downhill plunge.

Watering — as always — is most important.

Too much, too soon, at this stage will result in the rotting of growths — not only of new bulbs, but of new roots also.

At this stage, root growth is such that it cannot handle much water.

Great care should be taken not to over-wet the compost. Actually, the compost can be kept slightly on the dry side until roots and new

growths are established, *provided* the foliage is sprayed.

Proper feeding at this stage in growth of a plant is vital.

However, it should be remembered that organic fertilisers should not be used unless they are well diluted with water. It is always better to spray this mixture on rather than water it on at this stage of growth.

Brazilian Oncidiums

G. H. SLADE

• Few orchids respond better to outdoor conditions than the Brazilian Oncidiums.

They include the most beautiful members of the genus; now that their cultivation requirements are understood they have become among the easiest orchids to grow to perfection. They flower over a long period, despite the massive inflorescence they produce, their flowers withstand rain, wind, sunburn and rough conditions in an extraordinary manner. Although grown outside, unprotected, after a recent gale associated with 50 m.p.h. winds, they were the only plants in the whole garden which showed no effects of wind damage. Roses, Frangipannis, Bananas and Camellias looked much the worse for the buffeting; the Oncidiums quivered, danced and swayed but came through unharmed.

In Sydney they require what can be summed up as "T.B." treatment. This can be explained by contrasting the old with modern methods of the treatment of T.B. then give the plants similar conditions. Take them out of their enclosed heated structures, remove the pot, then affix them to 6in. x 3in. x ½in. treefern blocks in the open air under no shading. T.B. treatment suggests fresh air, good food in moderation, outdoor treatment, rest, cool rather than warm conditions, minimum coddling.

Of course, one does not take a patient direct from a hospital bed and have him sunbake on an ocean beach for hours without forethought. Some initial protection is necessary. A lotion of a white inert material like china clay, talc or even Bon Ami mixed with water and a little milk can be applied to the leaves as a sun-screen until they have readjusted themselves to the new conditions. In a couple of months the coating will have weathered off leaving the leaves safely able to endure direct sun.

The blocks can be affixed to a wall on which is mounted a suitable support. A welded wire

fabric of 1in. x 3in. mesh coated with aluminium paint makes an excellent support. Plants can be moved into a more sunny position as they harden, so that they eventually face full sun most of the day.

All the Oncidiums (illustrated) are grown as described in full sun. The leaves are dark green with noticeably yellow, turgid pseudobulbs. The spikes are strong and relatively compact, producing a wonderful display on a wall which was previously bare. The plants have been grown under these conditions over four years, having increased in size and strength spectacularly.

In other sub-tropical areas like Florida, California and Natal, identical treatment could be given; in cooler climates, full sun under clear glass with definite air movement may be suitably equivalent. High light intensity is essential; this can be utilised only with moving air, otherwise the leaves will scorch. Regular wet-dry cycles are a consequence of outdoor treatment. Although drenched each morning, the blocks are small enough to dry out by mid-day. Large blocks which do not dry out do not produce the healthy plants with active root growth on what one could consider small, or even mean sized blocks.

That unsightly feature of many suburban backyards, the paling fence, could be beautified to something quite attractive by affixing some A.R.C. 1in. x 3in. mesh with a display of Oncidiums and Mexican Laelias. Imagine the available space! The potentialities of growing sun-loving orchids out of reach of snails and soil-borne organisms could greatly expand Australian orchid growing potentialities and lead us to an attractive and new appreciation of orchids.

(See photographs on pages 121, 122, 139 and 140.)



CYMBIDIUM JUDY var. GAIETY

Received an Award of Merit, American Orchid Society. Seedling from Rosalita Dos Pueblos x Rosanna Pinkie. Photo. Dos Pueblos Orchid Co.



CYMBIDIUM SIRIUS var. GOLDEN DAWN

Best Cymbidium in Orchid Society of N.S.W. Winter Show. Hybridised and raised by C. Cambourn and A. B. Porter. Photo. A. B. Porter.



ONCIDIUM VARICOSUM

Inflorescence of *Oncidium varicosum* grown on wall as described, facing north-west in full sun, in exposed situation. An Autumn flowering species. Photo: G. H. Slade.



ONCIDIUM MARSHALLIANUM

This brilliant Spring flowering *Oncidium* revels in full sunshine and outdoor conditions. Photo: G. H. Slade.



COELOGYNE BARBATA

This unusual and attractive Orchid may be grown in a *Cymbidium* collection, as it requires similar conditions. It flowers in late autumn. Photo. H. J. R. Overall.

Vanda coerulea

A. B. PORTER

• Blue is a rare colour amongst orchids so that the discovery over a hundred years ago of *Vanda coerulea* was among the exciting finds of new orchid species.

Vanda coerulea is a variable orchid; in its best forms the flowers are large and rounded produced on long spikes which display themselves attractively from the foliage so that the plant in full bloom is an arresting sight.

The colour of the flowers ranges from almost white through pale and relatively unattractive blues, to rich sky blues. The best forms have delightfully tessellated and well-rounded flowers of a deep blue network on a paler blue ground. From these forms have been bred some of the most attractive hybrids.

Vanda coerulea differs from many of its related species in that it grows under cooler conditions, thus it should be cultivated under intermediate or even cool conditions, while most other Vandas require tropical treatment.

The interesting description of the Vanda in Sir Joseph D. Hooker's "Himalayan Journals" Volume 2, pp. 321-323 describes his encountering it in the Khasia Mountains in October 1850.

He remarks:—"We left Nurtiung on the 4th of October, and walked to Pomrang, a very long and fatiguing day's work. The route descends north-west of the village, and turns due east along bare grassy hills of mica-schist and slate. Near the village of Lernai oak woods are passed, in which *Vanda coerulea* grows in profusion, waving its panicles of azure flowers in the wind. As this beautiful orchid is at present attracting great attention from its high price, beauty, and difficulty of culture, I shall point out how totally at variance with its native habits, is the cultivation thought necessary for it in England. The dry grassy hills which it inhabits are elevated 3,000 to 4,000 feet: the trees are small, gnarled, and very sparingly leafy, so that the Vanda which grows on their limbs is fully exposed to sun, rain and wind. There is no moss or lichen on the branches with the Vanda, whose roots sprawl over the dry rough bark. The atmosphere is on the whole humid, and extremely so during the rains; but there is no damp heat, or stagnation of the air, and at flowering season the temperature ranges between 60° and 80°, there is much sunshine, and both air and bark are dry during

the day: In July and August, during the rains, the temperature is a little higher than above, but in winter it falls much lower, and hoar-frost forms on the ground. Now this winter's cold, summer's heat, and autumn's drought, and above all, this constant free exposure to fresh air and the winds of heaven, are what of all things we avoid exposing our orchids to in England. It is under these conditions however, that all the finer Indian Orchideae grow, of which we found *Dendrobium Farmeri*, *Dalhousianum*, *Devonianum*, &c., with *Vanda coerulea*; whilst the most beautiful species of *Coelogyne*, *Cymbidium*, *Bulbophyllum* and *Cypripedium* inhabit cool climates at elevations above 4,000 feet in Khasia, and as high as 6,000 to 7,000 feet in Sikkim.

On the following day we turned out our Vanda to dress the specimens for travelling, and preserve the flowers for botanical purposes. Of the latter we had 360 panicles, each composed of from six to twenty-one broad pale-blue tessellated flowers, three and a half to four inches across: and they formed three piles on the floor of the verandah, each a yard high! — what would we not have given to have been able to transport a single panicle to a Chiswick fête."

Vanda coerulea has been often used as a parent with considerable success. Many of its hybrids are much more free flowering than the species itself. They are more easily cultivated than the parent, and as the blue colouring of *Vanda coerulea* seems to dominate its offspring, a fine array of blue hybrid Vandas are now available which can be cultivated with ease in a cool glass house or in a bush house.

One of the most interesting is *Vanda Rothschildiana*; each parent of which is difficult to grow. *Vanda Sanderiana*, the other parent, is found at sea level in Mindanao. It thus requires as tropical conditions as that of any Vanda. It is not easily grown in Sydney. *Vanda Rothschildiana* seems to inherit the best characteristics of each parent for it grows readily, is not liable to leaf die-back, flowers almost continuously and is one of the most beautiful Vandas. In the Hawaiian Islands many thousands of hybrid Vandas have been raised, yet none is more popular than this magnificent hybrid. It has been raised many times.

Continued in December Issue.

BEGINNER'S LEVEL—Continued from page 128
when there are no flowers and some plants "turn it in" is the test. It is here that a beginner fights back or "turns it in", too. It is surprising how many growers there are who still go on growing orchids after they are beaten. They don't realise that they have lost out until they sell out. They do both very readily and should never have been in the game in the first place.

Initial equipment in southern Australia is such an expensive item that you cannot afford to do things by halves or without thought. The plants should fit the latitude or be fitted by modifications to counteract the latitude. That means heating. In whatever form applied it is not cheap.

ATMOSPHERE

Unfortunately, the odds are against small collections of plants, whatever they are. Orchids thrive in humid plant-loving atmosphere. This atmosphere is built up in a large collection very quickly, in a too-small collection not at all. You may well say, who can afford to take up orchid growing at that rate? Well, there are ways to do that provided certain basic principles are followed. Briefly, they are the buy-and cull, buy-and-cull methods. To begin, get anything at all in the type of orchid you wish to grow. If *Cypripediums*, buy *Cypripedium insigne* from other growers who cannot be

bothered with it any longer. Drive a hard bargain, because there is lots of *insigne* about among growers. If possible, get large plants and divide and repot until the glass house is full of the cheaper commoner types of slippers. Then begin a slow acquisition of better types that suit your tastes. The same methods should be applied to *Cymbidiums*, but can only partly function with *Cattleyas*. It is on these easy-to-buy plants that you gain practice in orchid growing. No matter what the flowers are like, some of those first plants of yours will be difficult to part with, and the odds are that to the end of your orchid growing career you will retain one or more of the from sentiment.

Buy what you like rather than what someone says you should, but make sure it will fit into your scheme. When someone tells you that he has the world-beater, give the advice offered by a well-known Melbourne grower . . . tell him to put it on the bench with the rest of the good ones to see how it lines up. After all; that is the acid-test.

When you have read all this, like the Editor, you will have observed that it is very elementary, very much reiterated, perhaps not in accord with your own views. But, after all, it is the elementary things we forget so easily and there is nothing like provocative statements to make you think for yourself, is there?

—43 Denman Ave., Glen Iris, Victoria.

Cultural Notes for Tasmania

F. W. CHILVERS

• Tasmanian orchid growers have been very fortunate this year in experiencing a very mild winter with an exceptional number of reasonably warm and sunny days. This must benefit plants a great deal, as well as a moderate saving in fuel and costs, and it will be most interesting to see the result of the mild winter in relation to the floral exhibits at our forthcoming Orchid Show in October.

The spring of the year can be the most rewarding and often the most disappointing period for orchid growers. For after careful attention for the plants over many months and watching carefully for flower spikes, it is inevitable that many will fail to flower. This can be most disheartening to the new growers, but such disappointments should make them persevere even harder to understand their plants and the conditions suitable to their particular cul-

ture. Such set-backs often create a greater interest in orchid culture as a grower is forced to try new methods and observe conditions in greater detail, for the likes and dislikes of particular plants are many and conditions of light, warmth, moisture and compost and its position in the glass house have a direct bearing on success.

The spring of the year will bring decided changes in temperature and light to the glass house and these should be watched carefully. Severe fluctuations should be avoided when possible and shading of the glass will have to be replaced to prevent severe damage to flowers in bloom and possible scorch to young and tender leaves that are near the glass. Shading is always a controversial subject. Dark blinds of the roller type will always be the best, but require to be rolled on and off to suit the weather.

that can be potted on to a larger pot with a minimum of disturbance to the roots and compost. Also plants that require complete new compost and are to be divided up or surplus issued, bulbs to be removed.

In removing the plants from the pot, all decayed material should be removed from the back of the plant and old pseudo-bulbs and decayed roots removed. At least three bulbs and new growth should be retained. Compost should not be removed from the front of the plant situated near the new growths or plants could suffer severely.

Pots should be clean or, if new, pots should be soaked in water for twenty-four hours to preserve the pottery. It is most advisable not to use too large a pot for weak or poorly rooted plants. Plants that require "potting on" require less disturbance and materials should only be removed from the back of the plant and decayed material at the base. These plants can be placed in larger pots that will enable them to develop for a year or more. Plants such as these can be "grown on" and eventually reach proportions to fill a small tub, which make magnificent specimens, but the inevitable day arrives when such huge specimens have to be split up into smaller pots and the cycle repeats itself. Plants in moderate size pots are Permanent shading is generally in use and this should be placed outside the glass if possible. "Lime wash" mixed with salt water makes it "stay put" much longer and "Millwhite" should be a suitable shade material, "stizzling" is preferred to the straight brush and looks much neater. A material called "summer cloud" of a pale green colour is an ideal shade and prevents that excessive glare that whitewash gives, perhaps the modern paint expert can help us in this regard. Houses shaded inside with butter muslin give excellent results and break the glare and heat from reaching the plants.

Preparation must now be made for the repotting of plants that require it. This is the most important operation of the year and where growth is from 1in. to 2in. high and compost is in poor condition, plants should be attended to. It is advisable to move those plants still in flower to a drier part of the house where moisture can be controlled and move plants to be repotted to a moister and shady corner of the glass house where they can receive frequent attention.

Plants of the *Cymbidium* variety to be repotted can be divided into two sections as follows. The larger plants, well rooted specimens

much easier to handle and on the average induce more regular flowering of huge specimens.

With *Cypripediums* care should be exercised in potting and only the minimum growths should be retained with the new growth and large pots should be avoided; it is fatal to plant too deep or bury the rhizomes of the plant, decay can set in immediately.

Miltonias and *Odontoglossums* need greater care. Small pots give the best results and severe root disturbance should be avoided.

Native orchid species should be attached to rafts or peat sections of tree fern and thrive on such conditions. They are always a pleasing sight in a glass house or hanging from a rafter or a wall.

Care after repotting is most essential. Water should be given sparingly and plants should not become saturated or roots will decay. Spraying through the pots or lightly overhead with a mist spray is beneficial on fine days, heavy shading is essential for several weeks after repotting.

• **PERSONALIA** :—Mr. C. Cambourn, who has been a Judge of the Society for many years, resigned from the office of Judge on the 6th July, 1959. Mr. Cambourn is recognised as an outstanding authority especially on *Cymbidiums* and has contributed largely to our present knowledge in the hybridising of this genus.

It was fitting, therefore, that on 21/7/1959 Mr. Cambourn was appointed a Reserve Judge and, therefore, his knowledge and experience will not be lost but he will be able to officiate in judging at Shows and has very generously intimated that he will assist in this regard.

Mr. A. Luth, of Waverley, who has been an Associate Judge for about five years, was appointed a Judge to fill the casual vacancy that occurred on Mr. Cambourn's retirement. Mr. Luth has an extensive knowledge, especially of miscellaneous genera, and he is assured of a very warm welcome at all judgments. His appointment was made on 21/7/1959.

A matter of interest especially to our country members is that also on 21/7/1959 the Committee of Management adopted a recommendation of the Judges and appointed Mr. H. Bond, of Marmong Point, Newcastle, and Mr. O. Towndrow, of Mayfield West (near Newcastle), Country Judges. Both of these men have acted as Country Associate Judges for several years and the Judges were satisfied that they have demonstrated the capacity necessary for this appointment.

MISCELLANEOUS ORCHIDS—

Continued from page 126

at the beginning of autumn to discontinue overhead watering of the *Cypripediums* and instead give them a good drink each week by soaking them to pot-rim height in a bucket of water.

The isolation area I consider absolutely necessary, particularly in a small crowded house. The old saying, that practically the only way to kill an orchid is by over-watering it, is true, and the time of greatest danger is during its period of rest. *Cattleyas* are very hard and will not die if over-watered, but they still receive a terrific set-back by losing front bulbs and dormant growth buds. One orchid which I desired very much was *Cynoches chlorochilum*. It came my way, robust and healthy, in the summer of last year. Later a flower began to develop, but during the winter a rot commenced in the bulb and was so far advanced before I noticed it that the plant could not be saved. If this plant had been quartered for the winter with *Coelogyne cristata*, the *Anguloas*, *Calanthes* and resting *Cattleyas*, I would no doubt still have it to enjoy.

(3) LOWER SECTION

The lower stratum of the house contains *Miltonias*, *Odontoglossums*, *Odontiodas*, *rex Begonias* and maiden hair ferns. In this area there are two narrow benches, one on either side of the aisle and stepped down from the main bench. Height from the floor is two feet. On the shady side are the *rex Begonias*, whilst the *Miltonias*, *Odontoglossums*, etc., are on the bench on the side which receives most light. Maiden hair hangs in baskets below and in front of this latter bench.

I would like to preface my remarks about the *Miltonias*, *Odontoglossums*, etc., by stating that for many years it was considered well nigh impossible to grow these genera in Sydney. Experience showed that during the extremely hot period of summer they went back to such an extent that survival was limited to a couple of years with unsatisfactory flowering in the meantime.

The beauty of these orchids and no doubt the challenge involved in their culture induced a fellow club member to import modern hybrids and his early success aroused my enthusiasm. It seemed that to get ideal results with these orchids it would be necessary to have a separate air-conditioned house for them.

In my case this was impossible—they would have to grow in the same house as the other orchids. Here was a challenge to test the ten-

acity of the most courageous. There was only one position in the house that was at all favourable. It was on a bench in the coolest area, but with sufficient light for their needs. The conditions peculiar to the house which I mentioned at the beginning of the article now became an asset, insofar that direct sunlight was missing for half the day. Even so, however, the temperature could be too high, and how to lower it to a maximum of 80 degrees during the summer was a problem, but one which I found had already been solved. The house had a system of sprays just below bench height. I had already found that one nozzle was sufficient to provide humidity and the spray from this was directed down the passageway. The mist was directed to form an arc which extended eight feet. It swept past and slightly above the lower bench on which the *Miltonias* and *Odontoglossums*, etc., were placed, but did not touch them. The result was that a cool moist current of air passed by these plants all day and this tempering influence enables the plants to come through the summer in very fair condition. With a minimum of 60 degrees F. in winter and 80 degrees F. in summer, the year round variation is 20 degrees which, whilst not the ideal, is restrained enough to permit encouraging results. The effect of the spray can be emphasised by a comparison, for only two and a half feet above and slightly beyond the *Odontoglossums* are the *Phalaenopses*. The difference in maximum temperatures between these two close positions is 10-12 degrees F. on normal summer days.

What results have been achieved in six years of cultivation? Most of the original plants and propagations from them are still in active growth. All have flowered and do so each year. Two plants have died, but were killed by an overdose of inorganic fertiliser in one case and by a water rot in the other. A couple have remained small and have spindly growth, whilst several, after growing well and flowering for a couple of years then went back to smaller plants and spindly growth. In Sydney it would be better to allow the plants of *Odontoglossum*, *Odontioda* and *Odontonia* to flower only every second year, particularly when the spike has been kept on the plant for more than a week. The two factors which have to be taken into account in such an assessment are: (1) The plants were all unflowered seedlings when obtained and, as is always the case with any batch of seedlings, some will be worthless runts unworthy of cultivation even under the best of circumstances. I submit that I received my

share of these. (2) All the seedlings were modern hybrids. I consider that cultivation is easier when crosses are well removed from the species, and this holds particularly in the case of primary hybrids with *Odontoglossum crispum* as one of the parents. These two factors, particularly the latter, would have been decisive in many of the earlier attempts to grow *Odontoglossums* in Sydney. My results have been encouraging enough to include these orchids in a miscellaneous collection of orchids growing in the one house.

SUMMARY

(1) Keep in mind that the experiences outlined are those of an amateur grower with plenty of enthusiasm but limited time, space and means at his disposal. It must be stressed that the article is not for experts, but is written to encourage the *Cymbidium* grower to commence a collection of miscellaneous orchids.

(2) It is possible, in the metropolitan area of Sydney, to grow a miscellaneous collection of orchids and to include representatives of all worthwhile genera.

(3) The degree of success will depend on many factors, the most important of which is the grower's ability to adjust environment and provide conditions to suit the needs of each genus.

(4) Two types of houses are needed, (a) a semi-glass structure without artificial heat for plants which require cool winters to ensure flowering, and (b) a heated house for other genera and most foliage plants.

(5) The heated house should be carefully planned in advance with regard to size, materials, strength, aspect, ventilation, light, humidity and heating, so that only easy minor adjustments need be made if required after plants are established.

(6) It is possible to grow all worthwhile heat loving orchids in such a house with pleasing results if a minimum of 60 degrees F. is maintained.

(7) *Miltonias*, *Odontoglossums* and multi-generic hybrids of this type can be grown in this house if placed so that summer heat can be kept down to 80 degrees F. The occasional days in summer when Sydney's outdoor shade temperature rises above one hundred degrees F. will not upset the plants unduly.

(8) It is not claimed that the measure of success is as great as when genera can be grouped in separate houses, but the degree of success is satisfying and can be enhanced by frequent culling of stock and concentrating on

strong growing varieties of each genus.

(9) The labour entailed will not be measured in terms of work, as orchid growing is an absorbing hobby. The pleasure obtained in flowering a beautiful new hybrid can be shared with your friends and the solution of problems of cultivation is an educational experience of great value.

• **PARRAMATTA AND DISTRICT ORCHID SOCIETY:**—The winter display of this Society was held in Grace Bros. Building on June 29, when cash prizes were awarded in eight classes. Results were as follows:

Novice Cypripedium. Mrs. A. J. Webb (Melrose).

Novice Cattleya. Dr. L. Jeffery.

Novice Miscellaneous. Mr. Allen (*Zygotum Mackayii*).

Novice Cymbidium. Mr. Allen (General Montgomery).

Open Cypripedium. Mr. A. Yee (Winslow).

Open Cattleya. Mr. A. Cook (New York).

Open Miscellaneous. Mr. R. Miller (*Laelia anceps*).

Open Cymbidium. Mr. R. Miller (Oscar Persson).

If talking of orchids leads to the growing of orchids, Parramatta seems likely to number more bulbs per head of population than any other Sydney suburb. When Parramatta and District Orchid Society decided, on the invitation of its President, Mr. A. J. Webb, to organise a week of festival in September it had three purposes:—to increase, if possible multiply, the attendance at its spring show; to associate Parramatta with orchids as Grafton is with the Jacaranda; and to make the Northcott School for Crippled Children the beneficiary of the entire effort.

The pageantry will start on Saturday, September 12, five days before the opening of the orchid show, with a parade of floats, queens, probably a dozen bands led by the Eastern Command Military Band, 250 marching girls, 100 physical culture girls, 150 apprentices, 150 New Australian folk dancers, Boy Scouts and the Parramatta Police Boys' Club. After traversing the city the procession will proceed to Cumberland Oval, where there will be a carnival afternoon and evening, with displays of marching and physical culture, dancing and singing.

On Thursday (September 17) the orchid festival will open in the City Hall at 10 a.m.

OBITUARY:—One of the eight founders of the Queensland Orchid Society, Mr. Frank Hayes, has died in Brisbane at the age of 65.

In addition to being a foundation member, the late Mr. Hayes served on the committee of the society for a number of years and was always prepared to help further the interests of orchid growing.

He owned a wide collection of orchids, and was known throughout the State for his expert and neat potting.—P.G.C.

The Parramatta and District Orchid Society mourns the loss in June of two foundation members who, in their respective spheres, had given it long and valuable service.

Mr. C. Lawrence, for several years vice-president of the Society, had made orchids his hobby when he was in charge of the poultry section at Hawkesbury College. Retiring to his property at Baulkham Hills, where he quickly established himself as a turkey breeder, he was one of a small band of enthusiasts associated with Mr. A. J. Webb in founding the Parramatta Society. A stalwart in the formative years of the organisation, he continued to take an active part in its affairs until failing health caused him to resign the vice-presidency.

Mrs. S. Mills was one of the devoted women on whom all orchid societies depend for continuous and unostentatious work behind the scenes. Whether handing round the monthly cup of tea after meetings or helping to keep the annual show running smoothly, she was always busy, always cheerful and smiling, with a ready word for all, but especially for strangers and new members. She attended the meeting in June, apparently in her usual health, and members were stunned when her death was announced at the meeting four weeks later. Mr. S. Mills is a regular and successful exhibitor at the Society's shows and has the sympathy of all members in his bereavement.

• **EASTWOOD & DISTRICT ORCHID CIRCLE:**—"Flowers for the Bride" will be a special attraction at the Spring Show of this Society in the Masonic Hall, Eastwood, on Friday, 25th September, from 1 p.m. until Saturday night. Schedules are available from live-wire Hon. Sec. Mr. C. L. Hickson, WJ2115. Featured for the first time in 1958, this new attraction proved most popular.

• **FRONT COVER:**—*Vanda coerulea* photographed by Mr. G. E. Glissan.

Continued from page 130

show. Various Slippers and Cattleyas, together with foliage plants and ferns embellished this group.

Mr. J. Lawler presented a nicely arranged group which included the following quality *Cypripediums*, County Palatine, a nicely rounded form, *Diana Broughton* x *Grace Darling*, yellow green with a white edged dorsal; the distinct *Alma Gavert* on a tall stem; the dainty off-white *F. C. Puddle*, *Bordube 'Eau de Nil'*, green and brown; *W. N. Evans 'Flambeau'*, reddish; *Balaclava* with a fine large spotted dorsal. *Dendrobium Lady Constance* with brightly coloured flowers, various *Miltonias* and *Phalaenopses* added to the interest of the exhibit.

The Dos Pueblos Orchid Company displayed a number of fine Orchids with an excellent variety of foliage plants. Amongst the Orchids were *Cattleya Pillar Leon*, a huge plant with three large light pink flowers; a freely flowered and colourful *Dendrobium Madame Pompadour*, contrasted with the small *Zygopetalum Blackei* *Negus*, and a pale mauve but very shapely *Vanda Rothschildiana*. Several showy *Cypripediums* and *Cattleyas* added colour to the display. A lovely *Alocasia Watsoniana* stood out amongst the various *Calatheas* and *Philodendrons* exhibited.

Mrs. K. E. Thompson staged a nice display which included a magnificent *Lycaste Skinneri* with six flowers and buds, light pink with a reddish lip; *Vandas Coerulea*, *Honolulu* and *Lester McCoy* x *C. S. Fisher* with large spikes; *Odontoda Alamo* with small red black flowers, *Cypripediums Claire de Lune*, best *Maudiae* type; *John Henry*; the nicely spotted *Mildred Hunter* and the green and white *Litfield*. The exhibit was arranged with various choice foliage plants and ferns.

• **EAST HILLS & DISTRICT HORTICULTURAL & ORCHID SOCIETY:**—

With a new secretary—Mrs. W. G. Swords—this Society plans to hold a very special Annual Show at St. Christopher's School Hall, Tower St., Panania, on Saturday, 19th September, 1959.

Notes From Affiliated Societies

• NORTH SHORE ORCHID SOCIETY:

The North Shore Orchid Society's Winter Show on 3rd and 4th July, 1959, was one of the best Sydney has ever seen.

The display of foliage plants was well worth a trip to see, Lou Sasso being the winner—a new departure for Lou—with Jim Mackinney a close second.

Reg Trenerry's display of *Cypripediums* was a magnificent effort. It is displays like these that make orchid shows so attractive to the general public.

A very interesting feature of the show was that all prizes in the *Cymbidium* section, with one exception, were won by Australian hybridised and grown seedlings. It is worthy of note also that the Champion at the Orchid Society of New South Wales Winter Show, and also Western Suburbs, was a local product.

LIST OF AWARDS

Champion Cymbidium. Sirius 'Golden Dawn'. Mrs. M. Tyler.

Reserve Champion Cymbidium. Sirius. Mr. C. Cambourne.

Champion Cypripedium. Memoria W. Worth. Mrs. W. Worth.

Reserve Champion Cypripedium. Euryiades. M. R. Trenerry.

Class 1—*Best Group Cymbidium*. Mr. A. R. Persson.

Class 2—*Best Group Cypripedium*. Mr. R. Trenerry 1st; Mr. L. Sasso 2nd; Mr. T. Henry 3rd.

Best Cattleya. Mr. A. R. Persson.

Class 3—*Best Miscellaneous Orchid*. Mr. G. Wilkins.

Class 4—*Best Display of Foliage, Plants and Tree Ferns*. Mr. L. Sasso 1st; Mr. F. Mackinney 2nd.

Class 5—*Best Novelty Arrangement of an Orchid or Orchids (Cut Flowers)*. Mrs. F. Mackinney 1st; Mrs. Rhodes 2nd.

Class 6—*Best Shoulder Spray of Orchids, any Genera*. Mrs. F. Mackinney 1st; Mrs. Rhodes 2nd.

MEMBERS

Class 7—*Best Cymbidium*. Sirius. Mrs. C. Cambourne 1st; Wylan 'Sailor Bay'. Mrs. J. Jenkinson 2nd.

Class 8—*Best Cypripedium*. Memoria W. Worth 1st; Mildred Hunter. Mr. C. M. Taylor 2nd.

Class 9—*Best Group Orchids*. Mr. L. Sasso 1st; Mr. A. R. Persson 2nd.

Champion Cymbidium. Sirius x 'Golden Dawn'. Mrs. M. Tyler.

Reserve Champion. Sirius. Mr. C. Cambourne.

Champion Cypripedium. Memoria W. Worth. Mrs. W. Worth.

Reserve Champion. Eurybrabes. Mr. R. Trenerry.

Best Cattleya. B.L. J. K. King x C. Jutyieu Westonbirt. Mr. A. R. Persson.

Best Miscellaneous Orchid. *Cynoches*. Mr. G. V. Wilkins.

MEMBERS

Best Cymbidium. Sirius. Mr. C. Cambourne 1st; Wylan x 'Sailor Bay'. Mrs. J. Jenkinson 2nd.

Best Cypripedium. Memoria W. Worth. Mrs. W. Worth 1st; Mildred Hunter, H.C. Mr. C. M. Taylor 2nd.

—Chas. M. Taylor, Hon. Secretary.

• IPSWICH ORCHID SOCIETY:—A

new Orchid Society has been formed in Ipswich, Queensland. It came into being on March 3rd, 1959. It began with 19 members and such is the enthusiasm for growing orchids in this district that in four months it has almost doubled itself and many more showing interest.

The officers elected were:—Patron, Alderman H. V. Gibbs. President, Albert E. Roberts. Vice-president, Dr. J. R. Roper (late of Sydney) Hon. Technical Adviser, Trevor E. Hunt. Hon. Secretary, Mrs. C. Kelly. Hon. Treasurer, Charles F. Becker. Committee, Messrs. J. Halley, Dr. W. T. Gibbs, L. Lobley, J. Hart.

The Ipswich Orchid Society meets on the first Tuesday of each month at 8 p.m. in the Liberal Party Rooms (above the Wintergarden Theatre), East St., Ipswich.—C. Kelly, Hon. Sec.

• S.A. ORCHID SOCIETY:—The following is an account of three monthly meetings and our Winter Show:—

April. The President, Mr. Neil Christoph, and Messrs. Jack Langdon and Wesley Harris provided talks and dealt with many genera—some not often seen in cultivation—and Miss Linley Thomas supplemented with slides.

Popular votes—Miss I. Thomas *Cattleya Mantinii*, Mr. A. McAllen *Cypripedium Holdenii* and W. Harris B.L.C. *Xantheo* x L.C. Mrs. Medo. Novice Section—Mr. S. Wickes *Dendrobium Phalaenopsis*.

May. Kodachrome slides from Victorian orchidists were shown and greatly enjoyed.

Popular vote—Mr. A. McAllen *Cypripedium Redstart* var. *Exbury*, W. Harris *L.C. Mipedo* and *Trichoglottis Philippinense* var. *braciata*. This last, together with *Brassavola nodosa*—both interesting botanicals—were seen by many for the first time.

Novice Section—Mr. C. Homes *Dupreana* x *Momos*, Mr. R. Waife *Odonto. grande* and Mrs. C. Homes *Cypripedium Lady Philmonii*.

June. A *Cypripedium* discussion and potting demonstration by the president. Popular vote—Mr. F. H. De Rose *Vanda Oscar Kirsch*—the first blooms on a well grown plant. W. Harris *Cypripedium Haroun*, N. Christoph's seedling *Cattleya Ann Sander* x B.C. Roger Sander.

Novice Section—Mr. R. Waye *Cypripedium Alswick*, Mrs. C. Homes *Cypripedium Warrior* (Greens) and *Goliath*.

The Third Winter Show on July 2nd was again held in the Royal Society room and was considered quite up to expectations in spite of a late season. We had less than three inches of rain in the first half of the year. However, the late hybrid *Slippers* might grace our Spring Show.

Our President's blooms included a very fine, shapely *Cypripedium Snow Bunting* and *Eastlea*; also a very dark B.L.C. *Ceylon Delight*.

Mrs. C. Homes—a new exhibitor here—gave us a pleasant surprise with her *Cypripedium Perseus*, *Blagrose*, *Warrior* (Greens) and *Balantis*. Also three fine blooms of B.C. *British Queen*.

Mr. A. D. McAllen's plants and blooms were exquisite. A *Lycaste Skinneri*—three lovely blooms plus buds. *Cypripediums* included *Lunium 'Imbros'*, *Peridot*, *Grace Darling*, *Blanchory*, *Warrior* (Greens), *Tearlath 'Ixion'* with four blooms, *Red Admiral*, *Kay Kay*, *Radmage*, *Saraband*, W. N. Evans and *Kirkasley*.

Mr. J. Landon's *Cymbidium Lucastes* and *D. Phal.* var. *Compactum*.

Mr. R. Waye's plants included *Cypripedium Ranson*, two nice blooms on *Cattleya Hardyana Rex* x *L.C. Hertha*, and a clear, bright pink *Cymbidium Dawn Lights*.

W. Harris' *Cypripediums Harroun*, *Kay Kay*, *Rosy Dawn* and a *Cattleya Trianae* hybrid—white with pale pink in lip.

Mr. F. H. De Rose—*Blagrose* and six fine *Golden Emblems*.

Mr. F. J. Boyle's first exhibit—*Cypripedium Virginia Red* and a fine *insigne*—*syllhetense* specimen.

• ANNUAL SHOWS

North Shore Orchid Society.—3rd, 4th and 5th September. Chatswood Town Hall.

Mosman Home Gardeners' Association.—4th and 5th September. Mosman Town Hall.

St. George Orchid Society.—10th, 11th and 12th September. Legacy House, Ormonde Parade, Hurstville.

Belmont-Swansea District Orchid Society.—11th and 12th September. R.S.L., Swansea.

Illawarra District Orchid Society.—11th and 12th September. Pioneer Hall, Wollongong.

O.S. N.S.W. Festival. 15th, 16th, 17th and 18th September. Sydney Town Hall.

Newcastle Orchid Society.—16th, 17th, 18th and 19th September. Supper Room, City Hall, King Street, Newcastle.

Parramatta and District Orchid Society.—17th, 18th, and 19th September. City Hall, Parramatta.

Gosford and District Orchid Society.—17th, 18th and 19th September. Masonic Hall, Gosford.

South Coast Orchid Society.—17th, 18th and 19th September. Community Hall, Princes Highway, Corrimal.

Manly Orchid Circle. 18th and 19th September.

East Hills and District Horticultural and Orchid Society.—19th September. St. Christophers School Hall, Tower Street, Panania.

Shoalhaven Orchid Society.—20th and 21st September. R.S.L. Hall, Junction Street, Nowra.

Commonwealth Bank Orchid Society.—22nd September. Commonwealth Bank, Sydney.

Manning River Orchid Society.—23rd September. Taree.

Eastwood and District Orchid Circle.—25th and 26th September. Masonic Hall, Rowe St., Eastwood.

Western Suburbs Orchid Society.—25th and 26th September. Soldiers' Memorial Hall, Concord.

Sutherland Shire Orchid Society.—26th September. Masonic Hall, Cronulla.

Sydney Orchid Society.—26th September. R.S.L. Hall, Anglo Road, Campsie.

Yagoona and District Orchid Society.—26th September. Public School, Yagoona.

Maitland Orchid Society.—2nd and 3rd October. Maitland Town Hall.

Camden Orchid Society.—3rd October. R.S.L. Hall, Oxley Street, Camden.

Blue Mountains and District Orchid Society. 9th and 10th October. Citizens' Hall, Western Highway, Warrimoo.

Grand Orchid Festival

by THE ORCHID SOCIETY OF N.S.W.

SEPTEMBER 15th, 16th, 17th & 18th
SYDNEY TOWN HALL

Official Opening by
The Right Honourable The Lord Mayor of Sydney
Alderman H. F. Jensen

On Tuesday, the 15th September, at 3 p.m.

The Orchid Festival is recognised by all, including English and American visitors, as being the greatest Show of Orchids in the World.

The Town Hall becomes a huge garden of exotic plants and flowers, with magnificent exhibits by the Affiliated Societies, all staged to perfection in natural settings. Many Prizes are offered for the best orchids grown by amateurs in the various genera.

Helpful advice and information can be obtained on all aspects of Orchid growing.

A Glasshouse filled with beautiful Orchids and Foliage Plants will be raffled with all proceeds to the Royal Blind Society of N.S.W.

DO NOT FAIL TO SEE THIS YEAR'S ORCHID FESTIVAL

Open:	TUESDAY	12 noon-10	p.m.
	WEDNESDAY	10 a.m.-10	p.m.
	THURSDAY	10 a.m.-10	p.m.
	FRIDAY	10 a.m.-9.30	p.m.

Admission:
2/6 ADULTS
1/- CHILDREN



NANKIVELLS ORCHIDS

74 Sheridan
Street,
Cairns

WRITE FOR
LATEST
PRICE LIST

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot "Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and
yellow.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Primulinum, 30/-. Pale to dark
mauve.
D. Fimbriatum, var.: oculatum, 30/-
Yellow, maroon throat.
D. Farmerii, 30/-. Pale pink.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/-. Pale mauve.
D. Hildebrandii, 30/-. White and
yellow.
D. Densiflorum, 25/-. Yellow.
D. Densiflorum, 30/-. Yellow.

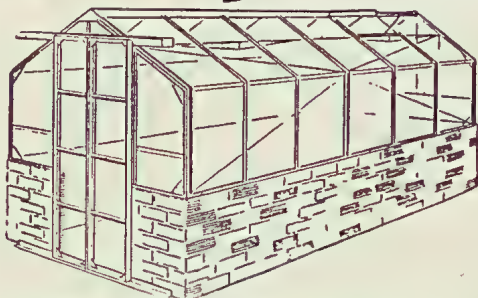
AIR FREIGHT EXTRA. ALL PLANTS 30/- FLOWERING SIZE

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet

Price: £93. 12. 6.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

TREMORVA ORCHIDS

NEW ADDRESS

All Orchid Friends and Correspondents please
note I have moved from Lane Cove. Future
address will be

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE, N.S.W.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

Corrugated Fibreglass Sheets

These are ideal covering for your orchid houses. Translucent, 80% sunlight. Long life, easy to fit by any handyman.

PRICES { 6ft. x 2ft. 8in. corrugated sheets £5.
8ft. x 2ft. 8in. corrugated sheets £6/10/0.

Also ideal for verandahs, sun rooms, etc.

FOR DETAILS RING XJ5350

OR CALL

14 CHANDOS ST., BALGOWLAH

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

GIFT BOOKS

- ORCHIDS, THEIR CULTURE (Bruce Hogg, Melb.). Col. & B/W plates. £2.10.0. Post 1/3.
- ORCHIDS IN AUSTRALIA (Fred Moulén). With 100 full colour plates. Ltd. edn. £6.6.0. Post 2/-.
- ORCHID HANDBOOK (Orchid Soc. of N.S.W., compiled J. Bisset, A. B. Porter & H. J. Lawler). 8/6. Post 5d.
- CULTURAL TABLE OF ORCHIDACEOUS PLANTS (J. Murray Cox). Col. & B/W plates, now out of print. £8.10.0. Post 2/6d.
- COLOMBIAN ORCHIDS (M. O. Hernandez). Col. & B/W plates, English text. £6.4.0. Post 3/6d.
- WILDFLOWERS OF WESTERN AUSTRALIA (C. A. Gardner). New, enlarged revised edn. Bound copies £3.3.0. Spiral back (paper) £2.15.0. Post 1/6 each.
- THE AUSTRALIAN GARDEN BOOK (Reg. G. Edwards). Ills. £2.10.0. Post 2/-.
- SIMPLE PROPAGATION (N. J. Proctor). Ills. 13/3d. Post 1/-.
- PELARGONIUMS AND FUCHSIAS (A. G. Puttock). Ills. 5/- Post 6d.
- GROWING PLANTS UNDER ARTIFICIAL LIGHT (Peggie Schulz). Ills. £1.16.0. Post 1/3d.
- MODERN FOLIAGE PLANTS (A. B. Graf). Today's Decoration for Flower Shop and Home. Ills. 13/- Post 6d.
- THE CHARM OF GROWING ORCHIDS (P. A. Gilbert). Ills. £1.16.0. Post 1/3d.
- ORCHIDS (Matthias Riehl) 16 colour plates, including Cattleya aurea var. dowiana, Cymbidium Hybr., Dendrobium fimbriatum var., oculatum, etc., £3.2.0. Post 2/-.

We search the world successfully for Rare and Out-of-print Books.

Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.

We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.

10X British Aplanatic folding Magnifiers—of great use to Orchid lovers, £3.11.6.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

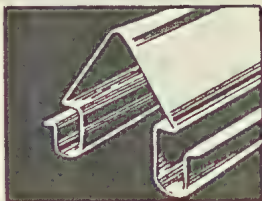
Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L. C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS	-	-	-	-	-	-	-	
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

Loose Sheets—Price extra.

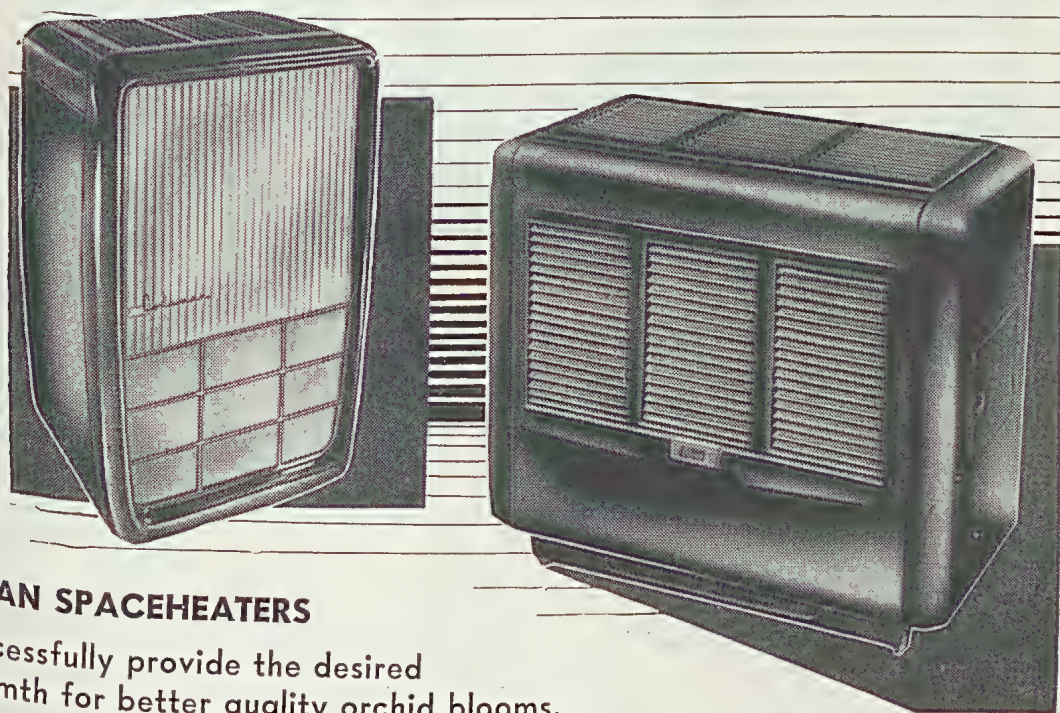
SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
49 Aird Street, Parramatta — YL9961
135 Forest Rd., Hurstville — LU2066
67-69 Burelli St., Wollongong—B3301-8
932 Pacific Highway, Chatswood—JA3462

Don't wait for winter...

OVERCOME YOUR GLASSHOUSE HEATING PROBLEMS
NOW AND MAINTAIN **TROPICAL TEMPERATURES**
THROUGHOUT THE COLDEST WEATHER - - - -

With a **SWAN SPACEHEATER** fumes are totally
eliminated — **NO MORE "BUD DROP"**



SWAN SPACEHEATERS

successfully provide the desired
warmth for better quality orchid blooms.

- No attention required • Silent operation.
- Constant temperatures maintained • Absolutely odourless

THE INEXPENSIVE FUEL OIL CAN BE
DELIVERED TO YOUR NURSERY, CITY OR
COUNTRY, BY THE MAJOR OIL COM-
PANIES.

SELECT **SWAN** FOR
YOUR **COLEMAN** HEATER
FREE SURVEY SERVICE

SWAN REFRIGERATION (DISTRIBUTORS) PTY. LTD.

Refrigeration, Heating
& Air Conditioning Engineers

93 WILLIAM STREET,
SYDNEY

FA 9318

SEND THIS COUPON NOW FOR FREE DETAILS
OF ALL GLASSHOUSE HEATING REQUIRE-
MENTS.

NAME:

ADDRESS:

O.R. 1/59.

LIMBERLOST ORCHID SEEDLINGS



L31 Vanda Poeppoe

FROM

J. E. Jones,

"LIMBERLOST" NURSERY

P.O. FRESHWATER — CAIRNS — N.Q.

L31 VANDA POEPOE

An Exhibition quality Terete Vanda of considerable size and excellent conformation. Colour is pale rose with a bright mauve lip. Growth habit is slower than most Terete Vandas and will flower under conditions suitable for Vandas of the Nellie Morley type.

16 inch Rooted Cuttings 15/- ea.
Three plants for £2
Please add Postage and/or Air Freight.

The Shepherd Press announce another

SMASH-HIT COOKERY BOOK

from the editors of "Oh, for a French Wife!"

"Cooking for Bachelors"

by TED MOLONEY and GEORGE MOLNAR

Profusely illustrated with line drawings by George Molnar.

121 pages of Recipes and lively advice on cooking by Ted Moloney

25/- ALL BOOKSELLERS

THE SHEPHERD PRESS

•

Yurong Street, SYDNEY, N.S.W.

UNSURPASSED QUALITY
ORCHIDS

by
(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

ORCHID GROWERS !

Save Time

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year of 4 issues posted.

*Agents for the "Australian Orchid Review"
in Great Britain*

Messrs. B. F. Stevens & Brown Ltd.,
Library & Fine Art Agents,
77-79 Duke Street,
Grosvenor Square, W.1.
LONDON

are carrying stocks of current and back num-
bers of the *Australian Orchid Review*.
Readers in Great Britain should communi-
cate with them regarding their supplies.

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Largest Raisers of Cymbidiums in Australia

20,000 Seedlings always in Stock

Raised in Australia by Australians, bred from the best Australian and overseas parents.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 10/- to 20/-	} ex Nursery
in 6" pots from 20/- to 30/-	

Early flowering and exhibition crosses always available. Many of our seedlings are flowering in 12 months, while the balance should flower in 2 years.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Monday to Saturday, 8 a.m. to 5 p.m. Sundays by appointment only.

Our seedlings are also available from Mr. F. Slattery, Bexley, at list prices.

WONDABAH ORCHIDS

724 Pennant Hills Rd.

Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

MON., SEPT. 28th

MON., OCT. 26th

MON., NOV. 30th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editor: G. Hermon Slade, Box 13, P.O. Homebush, N.S.W.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

FRI., SEPT. 11th

FRI., OCT. 9th

FRI., NOV. 13th

Patron: Sir JOHN B. CHANDLER

President: E. A. KNOBLAUCH

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

MON., SEPT. 21st

MON., OCT. 19th

MON., NOV. 16th

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide

THURS., SEPT. 3rd

THURS., OCT. 1st

THURS., NOV. 5th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: N. CHRISTOPH, 18 Clinton Avenue, Myrtle Bank.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

FRI., SEPT. 25th

FRI., OCT. 23rd

FRI., NOV. 27th

Patron: Sir ROSS McLARTY, Pinjarra.

President: E. L. THOMAS, 239 Railway Road, Daglish

Treasurer: C. W. CONNOR, 42 Birkett Street, Bedford Park.

Secretary: H. W. HILL, 20 Waterford Street, Inglewood.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross.

President: F. W. Chilvers.

Hon. Secretary: Mrs. R. F. Gee,

16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review

PUBLISHED QUARTERLY

VOLUME 24, No. 4

PRICE 3/6

DECEMBER, 1959



CYMBIDIUM x DORCHESTER var. 'JEANETTE'

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.



... Enchanting ...



CYMBIDIUM GIRRAHWEEN 'ENID'

Here is an excellent opportunity to add new varieties to your collection at reasonable cost.

VANDAS. Latest American strap leaf and semi-terete types. A good variety of these plants available in various sizes. Plants offered include the famous "NELLY MORLEY" John Noa's, Original 512 cross.

CATTLEYAS. A good selection of modern hybrids nearing flowering size.

MILTONIAS. Flowering size plants. Latest French hybrids.

PHALAENOPSES. Seedlings available in pinks and whites.

CYMBIDIUMS. All the top-class awards and show varieties on hand. Also top-line scarce types namely RIO RITA 'RADIANT', F.C.C.R.H.S., MIRETTA 'MATCH-LESS', Best Green and Award of Distinction N.S.W.O.S. Festival, 1958. Marmie Kingsford 'Erin', H.C.C. Aldis Lamp 'Arncliffe', Nam Khan 'Naomi', Balkis 'Jeanette' and many others.

HUNDREDS OF BACK-BULBS TO SUIT EVERYBODY

... Frank Slattery's ...

... Orchids ...

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS

They are all sturdy bush-house grown plants ex 4" pots. Lists Available.

SUSSEX 'LAELIA SASSO' H.C.	x PEARL 'MAGNIFICUM' F.C.C.	15/-
" " " "	x ATHENS 'TANANDRA'	10/-
" " " "	x PROFITA 'LUATH'	20/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x FASCINATION No. 2 (RED)	15/-
PEARL 'MAGNIFICUM' F.C.C.	x ATHENS 'TANANDRA'	15/-
PINK BEAUTY	x PEARL 'MAGNIFICUM' F.C.C.	10/-
BALKIS 'LUATH'	x REMUS F.C.C.	20/-
" " " "	x FASCINATION 'CRIMSON GLORY' A.D.	20/-
CARIGA 'SORRENTO'	x SUSSEX 'LAELIA SASSO' H.C.	20/-
ALEXANDERII WESTONBIRT' F.C.C.	x MIDLOTHIAN 'GREENSLEEVES' H.C.	15/-
" " " "	x FIREBIRD 'DOVER HEIGHTS'	15/-
" " " "	x BLUE SMOKE No. 1 (CALIFORNIA)	20/-
" " " "	x PEARL 'MAGNIFICUM' (JADE)	15/-
" " " "	x REMUS F.C.C.	15/-
" " " "	x FASCINATION	20/-
" " " "	x CARISBROOK 'THELMA' A.D. (ALDIS LAMP)	15/-
PAUWELSII C. DE HEMPTINE F.C.C.	x CARISBROOK 'THELMA' A.D.	15/-
REMUS F.C.C.	x " " 'CRIMSON "GLORY' A.D.	15/-
SPARTAN 'QUEEN MERRILONG' A.D.	x FASCINATION	20/-
MAYFAIR F.C.C. 'STONEHURST'	x REMUS F.C.C.	20/-

EARLY FLOWERING VARIETIES

LUSTROUS 'BETTY'	x WYLAN 'SAILOR BAY'	20/-
LUCY 'MEECH'S VAR.'	x REMUS F.C.C.	15/-
CHARM 'ELEGANCE'	x MIRETTA 'DAINTY LADY'	15/-
" "	x LILLIANA 'MERRILONG'	15/-

Most of these seedlings—with the exception of the early flowering varieties—are ready to be potted on to larger pots.

The nursery is open 7 days weekly and visitors are always welcome.

Plants are sent everywhere in Australia or overseas on request.

PLEASE SEND STAMPED ADDRESSED ENVELOPES FOR LISTS

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985

... For Perfection ...



ETTA BARLOW

“Enchantress”

Flowered from our cross D.P. 4103.

Rosanna Pinkie FCC x Balkis Perfection

The above photograph is of the seedling Etta Barlow var. “Enchantress” which was bloomed for the first time at Deewhy, N.S.W., in September 1959. A most outstanding flower and an excellent example of the expectancy of this cross. Award types and show bench flowers are a big percentage of those flowered to date.

6" pot £5.10.0

8" pot £12.10.0



Telephone:
98-6321

P.O. BOX 28

Orchid Company
(AUST.) PTY. LTD.

DEE WHY

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.



ROSARITA var. MAYBELLE

Seedling flowering from our cross 251

Alexanderi Westonbirt FCC/RHS x Carisona 'Glendessary'

The above photograph is of Rosarita "Maybelle" flowered at Deewhy, N.S.W., in September 1959. This flower has beautiful shape and texture which has been the outstanding feature with all the Rosaritas flowered this spring.

Divisions of these plants may still be selected for early delivery.



Country clients
especially catered
for. Inquiries
are invited.

Telephone:
98-6321

P.O. BOX 28

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

N.S.W.

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation or Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

*For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.*

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cyripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim.

- 304 Vanda tricolor x Vanda Sanderiana
11 Dendrobium Schroderianum x Dend. taurinum.
218 „ veratrifolia x „ Broomfieldii
689 Vanda Miyamoto x Vanda dearei
643 „ tricolor x Vanda Luzonica
647 Arachnis Maggie Oei x Sanderiana

30/-
EACH
3" POTS.
AVERAGE
7" to 9"
HIGH

15/-
EACH
2" POTS
AVERAGE
4" to 8"
HIGH

- 830 Dendrobium veratrifolia x Dend. taurinum
689 Vanda Miyamoto x Vanda dearei
643 „ tricolor x Vanda Luzonica
964 „ broomfieldii x Dendrobium taurinum.
868 „ Miyamoto x Renanthera Storei
730 „ suavis x Renanthera Storei
772 „ Hawaii Nui x Storei stratiotes.
942 Arachnis Ishbel x Vanda Manila
836 Dend. Schroderianum x Dend. taurinum
1021 „ Toftii x Dend. Phalaenopsis alba.
218 „ veratrifolia x Dend. Broomfieldii

- 836 Dend. Schroderianum x Dend. taurinum
830 „ veratrifolia x Dend. taurinum
964 „ Broomfieldii x Dend. taurinum
1021 „ toftii x Dend. Phalaenopsis Alba.
772 „ Hawaii Nui x Dend. stratiotes
„ superbiens x Dend. Schroderianum FCC.
1037 „ Bali x Dend. Mauna Kea.
643 Vanda tricolor x Vanda Luzonica.
689 „ Miyamoto x Vanda dearei
882 „ Mary Foster x Vandopsis lissochiloides
„ Flamerolle x Vanda suavis.
650 „ Boschii x Vanda Sanderiana

8/-
EACH
OUT OF
COMMUNITY
BASKETS.
AVERAGE
3" to 5"
HIGH

Add Postage and Air Freight

KIRKWOODS ORCHIDS

342 SHERIDAN STREET, CAIRNS, NORTH QUEENSLAND

ORCHID SUPPLIES from **FRANK SLATTERY**

Wiss Heavy Duty ORCHID SHEARS

The ideal shears for trimming
leaves and roots. Very sturdy.
32/6 per pair, plus 9d. postage

Now Available

Atlas Fish Emulsion Fertilizer
Japanese Osmunda Fibre

Here is a handy book for everyone.

ORCHID HANDBOOK

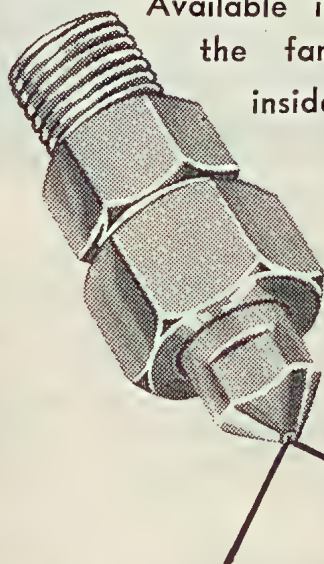
Compiled by the N.S.W. Orchid
Society Ltd.

Price 8/6d. Posted 9/6d.

Australian Todea Fibre
Tan Bark

Ready Mixed Cym. Compost

N.S.W. Agent for "WALDOR" glass houses. These houses are in use at the
Nursery and can be inspected.



Available in Australia for the first time
the famous American "**MONARCH**"
inside house FOGGER. Humidifies
without excessive water.

23/- each. Ex-Nursery. 24/- posted.



AT

**FRANK SLATTERY'S
ORCHID NURSERY**

12 Eddystone Rd., Bexley.
N.S.W. - Phone: LY7985

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £6.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

Flowering size English Odontiodas and Odontoglossums.

Miltonia seedlings, full flowering size, at 50/-.

Hawaiian Dendrobium seedlings of the best crosses, from 8/6

Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.

French and American Phalaenopsis seedlings, ranging in price from 15/- to £5, according to size and cross.

Interesting new Epidendrum, Diacrum and Allied Intergeneric Seedlings.

Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of imported Cattleya seedlings in all sizes for you to select from. These range in price from 12/6 for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

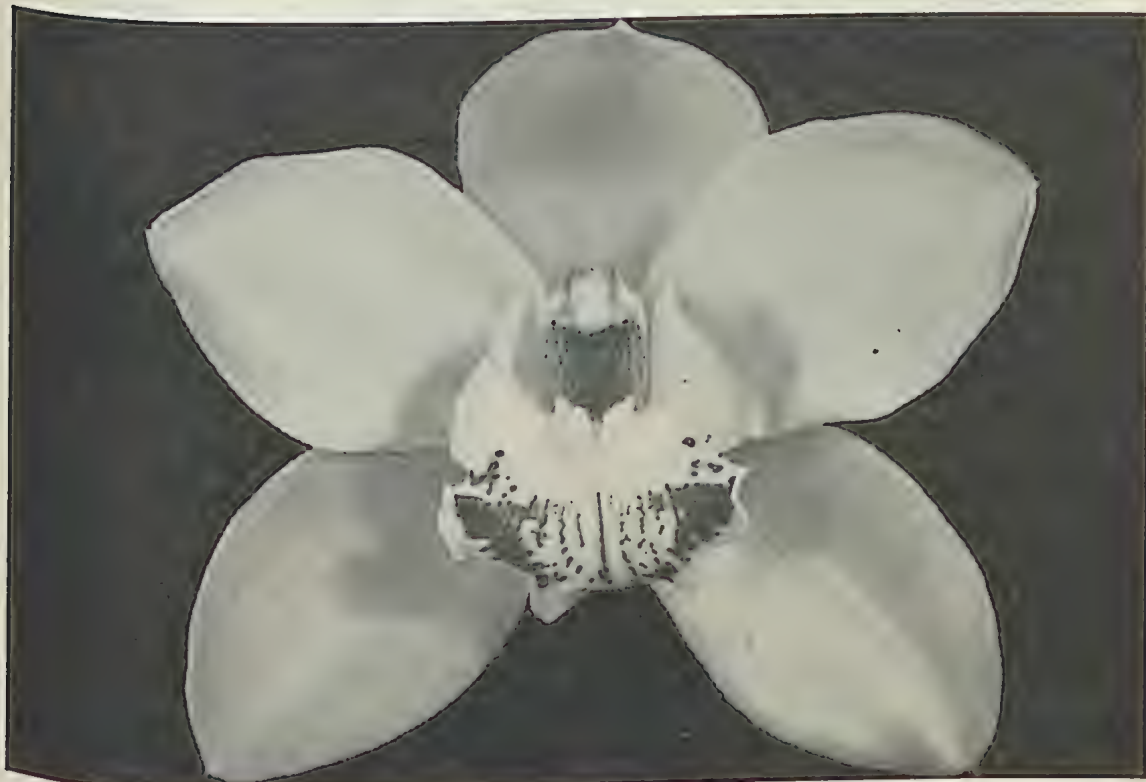
Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium - Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

A Book for all Animal and Bird Lovers

Bush Animals of Australia

By AXEL POIGNANT

*With Notes on Birds and Reptiles by J. R. Kinghorn, C.M.Z.S.
and on Furred Animals by Ellis Troughton, C.M.Z.S., F.R.Z.S.*

Containing 40 pages, each $14\frac{1}{4} \times 9\frac{1}{2}$ inches, of magnificent
Original Photographs of the Animals of Australia.

OBTAINABLE FROM ALL LEADING BOOKSELLERS

OR FROM

THE SHEPHERD PRESS, YURONG STREET, SYDNEY, N.S.W.

JOIN THE ORCHID SOCIETY OF N.S.W.

Membership entitles you to:—

- Twelve issues of the Monthly Circular containing Cultural Notes for each calendar month as well as a description of the various plants tabled for competition.
- A comprehensive Orchid Library—Books can be procured on loan for one month.
- Regular Monthly Meetings in the Y.W.C.A., Liverpool St., Sydney.
- A Letter Service for Country Members desiring cultural hints.
- Four quarterly issues of this Review if required.

Write for a nomination form to Secretary

K. LAMONT 42 LAWLEY CRESCENT, PYMBLE



SAYONARA var. "AUREOLIN"

From our seedling cross D.P. 4082.

Apollo Exbury FCC/RHS x Nam Khan FCC/RHS.

The above "Sayorara" was flowered this spring at Deewhy, N.S.W., many beautiful yellows with good form have been produced from this particular crossing.

Seedlings from this crossing still available.

6" pot £5.10.0

8" pot £12.10.0

The new sensation:

Plastic Pots now available at the nursery in sizes 4", 5", 7", 9".



Country visitors
especially invited
to visit our
Nursery.

Telephone:
98-6321

P.O. BOX 28

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

N.S.W.

Top Quality Cymbidiums

Arabella, Magnificent,
H.C., A.M.
Arabella, Waverley, H.C.
(twice) A.M.

Balkis, Burraneer
(Like Luath)
Carisbrook, Florence, A.D.
Cassandra, Evadne, A.M.
Cassandra, Toxteth, A.M.
Celia, Tanandra (Prize
Green—Early).

Ceres, F. J. Hanbury,
A.D. (twice).
Ceres, Girrahween, A.M.
Ceres, Westminster (spe-
cial pink).

Charm, Elegance, A.M.,
H.C. (Early).
Cordelia Kuringai, A.D.
(Colour Champion).

Cygnus, Janet (large,
cinnamon).

Cygnus, Magnolia, H.C.
Cygnus, Opalescence,
H.C.

Dracolan, Haberfield.
Eagle, Snow White (all
white).
Esmerelda (Prize Green).

Falcon, Illawarra.
Flamingo, Allambie, H.C.
(twice).

Girrahween, Enid, A.M.,
1st Class Certificate.
Girrahween, Gloria, A.M.
Gloriana, Tudor Rose,
(The Champion Pastel
Pink).

Historian, Lindfield, H.C.

Ispahan, Mascot, H.C.
(twice).

Joyance, Cinnamon, H.C.

Joy Sander, Ruth, H.C.
Joy Sander, Triumph.

Louis Sander, Girrah-
ween (A Champion
Pastel Pink).
Louis Sander, Kirribilli
A.M. (twice).

Miranda, Maisie A.M.

Nirvanah, Warringal, H.C.

Peri. Good Big Yellow
Lime Green.

Plover, No. 1 (Excellent
Green).

President Wilson, Haber-
field.

Princess Elizabeth, The
Giant.

Princess Elizabeth, Reece,
H.C.

Princess Margaret, Hab-
erfield.

Priam Ada Meech, H.C.
(Twice).

Profusion Violacia. (Pink
Champion).

Promona Tanandra, A.D.

Sandpiper Dorothy, H.C.
Sussex, Laelia Sasso,
H.C. (twice), A.D.,
A.M.

Swallow, Conquest, H.C.
(twice).

Swallow, Daffodil, H.C.
(twice), A.M.

Swallow, Magnolia, H.C.

Swallow, Soulangiana,
A.M. (twice), H.C.

Thora (late English cross-
ing)

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS: Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points in Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS": Available free on request.

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Orchid Specialists in Australia

37 Dobroyd Parade, Haberfield (Sydney), N.S.W., Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2531

Australian Orchid Review

VOLUME 24

DECEMBER, 1959

No. 4

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Some Conflicting Notions Concerning Orchid Culture— <i>Dr. George C. Kennedy</i>	171
Conversation Pieces	173
What Is New Under the Sun— <i>A. R. Persson</i>	175
Phalaenopses— <i>Sir John B. Chandler</i>	176
These I Remember— <i>A. B. Porter</i>	177
The 1959 N.S.W. Festival— <i>Fred Jones</i>	178
Sophrontis coccinea and its Allies — <i>G. H. Slade</i>	185
Orchid Breeder Gave Interesting Address to Coffs Harbour Orchid Club	185
Demonstration of Judging	187
Plastic Pots	189
Common Orchids Have Special Interests	191
Over to Fence—"Jum"	192
Shows and Things— <i>J. N. Rentoul</i>	194
Victorian Orchid Club Spring Show	195
Notes From Affiliated Societies	199

ILLUSTRATIONS

Cymbidium x Balkis var. 'Luath'	181
General View from Stage of 1959 Orchid Festival at Sydney Town	
Hall	182-183
Sophrontis Coccinea	184
Illustration Showing a Young Seedling Sprouting	184
Cymbidium x Etta Barlow var. Enchantress	184

Hon. Editors: A. R. Persson, A. B. Porter, G. Hermon Slade.

Please address all Editorial Matters to:

G. HERMON SLADE, Box 13, Homebush, N.S.W.

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

W. Harris
17 Old Belair Rd.,
Mitcham

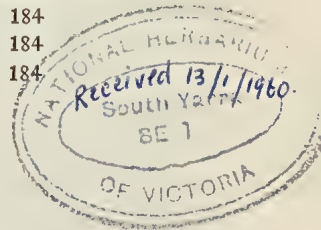
WESTERN AUSTRALIA

A. C. Dawson
17 Alness St.,
Applecross

TASMANIA:

F. W. Chilvers
1 Lassuade Ave.,
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.



While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

Editorial

SPRING SHOWS

• *SPRING SHOWS*:—The popularity of Orchid growing in Australia can be assessed by the numerous reports received which demonstrate the thousands of hobbyists who exhibit selected plants from their collections so that plants staged this year must have exceeded ten thousand—one wonders how many orchids are providing pleasure and interest for their owners.

Attendances at orchid shows must have exceeded a hundred thousand people; which testifies the public interest in the orchid family—a group of plants which can be cultivated with more ease and reward than any other floral group with comparable interest, beauty, versatility and lasting qualities.

Cymbidiums were by far the principal genus exhibited: indeed, the Spring shows become the Annual Orchid Event for each society when the innumerable varieties of hybrid Cymbidiums reach flowering perfection in August to September.

With the list of Spring shows growing longer every year and many classes included in the schedule of every show, the number of prizes won has far outgrown our space for publication. On looking over the many lists of prizewinners, it was very noticeable that while winning varieties in some genera are different in every show, a few varieties still dominate the Cymbidium classes.

Balkis Luath, Dorchester Jeanette, still occasionally Girrahween Enid — these names have been appearing as Champions and Reserve Champions for a number of years, but surely they must stand down before long. Dorchester Jeanette was shown at the first Sydney Festival in 1949, but did not win till several years later. It could be that some seedlings have already flowered which can and will be grown into Champions when their exact needs to produce perfection are understood.

It is interesting to observe the growing public interest in other orchid genera, many of which can be cultivated with equal facility as Cymbidiums. A wide selection of genera adds greatly to the appreciation of the extraordinary diversity of the orchid family. Vandas, Dendrobiums, Cattleyas, Aerides, Epidendrums, Oncidiums, Odontoglossums and Cypripediums were each in some degree represented at the shows; they helped the displays through their different colours, their variable flowering habits and their grace and charm.

It was refreshing to see at least a few epiphytic plants, other than orchids, used to provide a natural setting. Epiphytic moss was used freely; however, Bromeliads, Epiphyllums, Staghorn ferns (Platyceriums) and Anthuriums played a valuable part in placing orchids in a "natural setting".

In nature, orchids are by no means the only epiphytes. Bromeliads, Anthuriums, Epiphyllums and many epiphytic ferns live together on trees and on rocks as a balanced group; each tolerating, maybe even assisting the other. Orchids often grow near large Bromeliads sending their roots around and over into the Bromeliads' store of water, stealing or at least gaining from the ingenious water catchment device of the Bromeliads and of other epiphytes.

There is much beauty and interest latent in the possibility of growing orchids with other epiphytes where each can embellish the other in its requirements of light, of water and of protection, considerably to the betterment of the plants and of additional interest and fascination to the beholder.

Perhaps we may look forward to future shows which will demonstrate the use of orchids' natural associates in staging artistic, beautiful and attractive exhibits in natural settings; both of plants and of environment.

Some Conflicting Notions Concerning Orchid Culture

Dr. GEORGE C. KENNEDY

Institute of Geophysics, University of California.

• The range of conflicting instructions concerning the culture of orchids that has appeared in the literature over the last few years is enough to baffle both the amateur and the expert. Standard cultural instructions concerning light, temperature, watering and humidity are available in almost every book on orchids. However, articles frequently appear in the various orchid journals in which the author attributes his success in growing orchids to complete disregard of one of the standard cultural instructions.

For instance, we are told that *Cattleyas* and allied genera should always be allowed to dry between waterings. Yet the Missouri Botanical Garden reports excellent results by watering every day and *Toy's Orchids* have grown *Cattleyas* standing in water.

We are instructed to water only in the morning on bright days so the plants will dry by nightfall. Yet Eigeldinger in England attributes his success with many genera to watering only in the evening so the foliage may be wet overnight.

We are instructed to water with warm water in cold weather to prevent chilling of the roots, yet recently a grower in Germany attributes his success to watering with cold water in the winter, which is supposed to close the pores of the plants and make them winter hardy.

Adequate ventilation is stressed in most cultural notes. However, an article a few years ago advocated growing by a closed system with no ventilation.

Many of the English growers warn against drafts on plants. Yet recent growing instructions suggest plants should be grown with large fans moving the air at a four mile an hour clip through the greenhouse.

We are warned against letting dead leaves and dead flowers accumulate in the greenhouse because of the danger of ethylene gas, produced by bacterial action on the dead plant material. By contrast, many English growers in the last century regularly made a practice of composting manure and other vegetative matter under the benches in the orchid houses. Decay of this material releases ammoniacal fumes which act

as supplementary fertilizer for the orchid plants and produce handsome growth.

No field of orchid culture is as replete with contradictory instructions as those for growing *Odontoglossums* and *Miltonias*. Standard cultural instructions are to grow them well shaded, cold and wet. However, some recent articles suggest that *Miltonias* grow better warm than cold and *Odontoglossums* always make their growth during warm weather, not cold weather. Some of the *Odontoglossum* growers in the north-west now find *Cattleya* house conditions not unfavourable for *Odontoglossums*. Most growing instructions suggest that these plants should be heavily shaded. However, a grower in the mid-west reports that growing *Odontoglossums* in full sun under a fan is the secret of his success.

In summary then, it seems that almost any of the standard cultural rules can be violated with impunity. In fact, many growers attribute their success to complete violation of one or more of the standard cultural rules. It is pertinent then to ask, what are the cultural facts involved in growing orchids, if they grow under such widely diverse conditions and under such widely diverse regimes of water, light, heat and fertilization as are described in the literature?

My personal hunch is that none of these cultural instructions put their finger on the major growing instruction. I would say, *avoid root rot*. This, of course, is easy to say and much more difficult to do. It is certain, however, that the important parts of the orchid plant are the roots. If the roots are good the tops will soon be good. If the roots are bad the tops will soon be bad, and the ups and downs of the exposed portion of the plant, leaves, bulbs and flowering parts follow, with some time delay, the ups and downs of the roots. Whether you water frequently or rarely, whether you grow hot or cold, is primarily influenced by the kind of bacterial flora in your potting medium and in your greenhouse and the way the deleterious bacteria which cause root rot respond to your changes in ventilation, temperature and wet and dry. We should not think of ventilation as

a need for admitting air per se, but think of ventilation as a method of controlling fungus and sweeping out of the greenhouse spores of fungi, and also as a method of drying out parts of the greenhouse where bacterial infestations flourish, and thereby controlling them. A fresh new potting medium that has not broken down and that has a relatively low infestation of bacteria can stand daily watering and very large quantities of water, whereas, if a potting medium is broken down, even occasional watering will promote extensive bacterial growth and result in heavy root damage.

Further, different strains of bacteria thrive at different temperatures. I find that *Odonotoglossums* respond well if they are grown warm and extremely heavy water is given them. Likewise, *Maxillarias*, *Miltonias*, *Lycastes* and allied genera almost cannot be overwatered. Perhaps one of the roles of exceedingly heavy watering in these genera is to flush from the pots organic acids produced by bacterial action, and to continuously leach quantities of bacteria from the pot. Indeed, in the growth of *Cattleyas* I have had considerable success with exceedingly heavy watering as well as success with very light watering. Watering at intermediate levels where the plant is constantly moist but never drenched and never allowed to dry out seems to give me the greatest trouble. Under these conditions bacteria can multiply and their various waste products accumulate in the pots with resultant root damage. Apparently much heavier watering keeps these flushed from the pot. An early experience of mine, when I was first beginning to grow orchids and was having indifferent success with dry treatment, was to visit the greenhouse of a neighbour in Massachusetts who was growing *Cattleya* seedlings with great success. I was startled to find that all of his materials were kept wringing wet and many of his seedlings were growing under fog nozzles. Certain plants like *Cattleya* and some *Vandas* are very susceptible to the strains of bacteria that multiply in a pot under cold, wet conditions. The roots of *Odonotoglossums* and *Lycastes*, however, appear to be almost immune to these strains of bacteria that thrive under cold, wet conditions. But *Odonotoglossums*, *Lycastes* and allied genera frequently show a major root damage produced by bacterial root rot formed by the different strains of bacteria that grow in warm moist regions. Consequently, I would like to suggest that the problems of growing so-called cool growing orchids is not that these

orchids require the cool conditions so much as the fact that particular strains of bacteria, to which they have no resistance, soon overcome these plants if the conditions are warm and these strains of bacteria are permitted to multiply.

In general, it has been my experience that most genera of orchids, potted in coarse, fresh compost that drains well, that is not broken down, where bacterial colonies have little chance to get a major foothold, do much better under extremely heavy watering than under moderate watering. The very heavy watering, in fact, seems to control root rot and promote root development. It keeps organic acid produced by bacterial action flushed out and appears to keep the bacterial concentration low, or at least lower, than is the case where watering is more moderate and less quantities are flushed through the pot. An occasional complete drying out perhaps serves the same purpose. It seems to me that it is this fifth variable, the ups and downs of the bacterial flora in the pot and the resultant effect on root growth and root rot, that explains why certain growers can so successfully violate standard cultural instructions.

• *PARRAMATTA AND DISTRICT ORCHID SOCIETY*:—As a spectacle, the Society's Spring Show was the best yet staged in Parramatta, mainly because the committee had enlarged the classes for orchids and foliage plants. These, together with attractive non-competitive displays, filled four sides of the city hall.

The principal prize-winners in the display classes were Mr. S. Mills, who showed ingenuity in obtaining the effect of a waterfall and pool from commonplace materials, and Mr. A. Yee, who used a Chinese motif with symbols and jardinieres.

Among the non-competitive displays was one by Messrs. S. A. and R. E. and S. Batchelor of tastefully arranged *Cymbidiums* and one by Mr. N. Kelty, President of the Bushhouse and Indoor Plants Section of the R.H.S., who constructed a grotto which might have been transferred from any part of the Highlands complete with moss covering the rocks and ferns, staghorns and elkhorns growing in the crevices. To this Mr. R. Green added sufficient orchids preserving the congruity of the mountain scene.

The grand championship went to Mr. H. Heise for *Balkis Luath*. Mr. R. Hopkins' *Girahween Gloria* was reserve champion.

Conversation Pieces

• Our first article under this heading was written almost a century ago by Dr. Cruger, Director of the Botanic Gardens at Trinidad. It was printed in the Journal of the Linnean Society, Vol. VIII, p.129, in 1865.

CORYANTHES MACRANTHA

Coryanthes are natives of tropical America, being closely related to the better known Stanhopeas. The labellum is even more complex than that of the Stanhopeas, for it is bucket-shaped, which becomes filled with liquid while the flower is open. Two horn-like appendages above the "bucket" drip water in it the whole time the flower remains open. *Coryanthes* are among the most remarkable of all flowers, orchids or otherwise.

Of *Coryanthes macrantha*, Dr. Cruger says:

"Large humble-bees, noisy and quarrelsome, are attracted at first by the smell of the flower; but the smell probably only gives notice to the insects; the substance they really come for is the interior lining of the labellum, which they gnaw off with great industry. They may be seen in great numbers disputing with each other for a place on the edge of the hypochile. Partly by the contest, partly perhaps intoxicated by the matter they are indulging in, they tumble down into the "bucket" (epichile) half-full of the fluid secreted by the horn-like organs at the base of the column. They then crawl along the anterior inner side of the bucket where there is a passage for them. If one is early on the look-out, as these Hymenopters are early risers, one can see on every flower how fecundation is performed. The humble-bee in forcing its way out of its involuntary bath has to exert itself considerably, as the mouth of the epichile and the face of the column fit together exactly, and are very stiff and elastic. The first bee that is immersed will have the gland of the pollen masses glued to its back. The insect then generally gets through the passage and comes out with this peculiar appendage, to return nearly immediately to its feast, when it is generally precipitated a second time into the bucket, passing out through the same aperture, and so inserting the pollen masses into the stigma while it forces its way out, and thereby impregnating either the same or some other flower. I have often seen this, and sometimes there are so many of these humble-bess assembled that there is a continual procession of them through the passage specified."

What an interesting observation of what is in any case a highly developed and unusual orchid!

DIACRIUM BICORNUTUM

An orchid "Conversation Piece" is one which is worth talking about whether it is in bloom or not.

Let us imagine then that we go around a collection and pick up a plant of *Dacrium bicornutum* and discuss it.

Firstly, like many orchids it is an epiphyte. Why has it developed this habit?

In the struggle for existence, orchids, like many other plants, show clear evidence of their effort and adaptation to find a place not otherwise crowded out by larger and stronger living things. The epiphytic habit enables them to live high up, perched on forest trees where their special design enables them to find to the point of picking and choosing the first two essentials for green plants — adequate light and carbon dioxide. Many a forest floor is almost denuded of vegetation so dense is canopy above, filtering out almost all available light; yet orchids have brilliantly overcome this problem.

Imagine the difficulty of an orchid, always of relatively small dimensions, finding adequate light in a tropical jungle, if it had *not* developed the epiphytic habit.

Another essential — water — is a vital one, hence we note thickened stems, that is, the pseudo-bulbs and the leathery succulent leaves.

Even with these adaptations, orchids can only grow in relatively wet areas. From their restricted catchment area they collect enough during rain to store in their stems and succulent leaves to tide them over till the next rainstorm. Like a house depending on a tank, they never enjoy a surplus of water unless the tanks, their pseudo-bulbs, are full and it is still raining. In this respect, however, *Diacrium bicornutum* is like most other epiphytic orchids such as Cattleyas, Laelias or Dendrobiums.

However, let us examine the plant further. At the base of each pseudo-bulb is a tiny slit-like opening. Why? In nature this question would be immediately answered, for through this tiny portal would be passing a constant stream of ants. Why has this orchid so sacrificed part of its water reservoir in hollowing out its pseudo-bulb to provide a house for ants?

Ants are intelligent, small, active, clean and belligerent animals. The orchids have a useful

defender in warding off enemies; but this is probably not the principal reason. Adequate nitrogen supply, in suitable form, i.e., ammonium salts or nitrates, is a vital necessity for plants. Ammonium salts and nitrates are particularly deficient in wet climates, so restricted in fact, that their adequate supply is the main vital shortage in such otherwise fertile places. The nitrogen poverty is such that trees would not waste or lose one iota more than absolutely necessary; thus very little indeed is available for epiphytic vegetation.

Diacrium bicornutum has solved this insufficiency ingeniously by providing a home for ants, which are largely protein eaters. Proteins are rich in nitrogen, the plant has enabled the ant colony to find safe retreat, privacy and a home with enviable toilet facilities; all in the interests of its nitrogen requirements. Ants excrete their nitrogen in dry form, principally as uric acid. Because uric acid is practically insoluble in water there is in all probability a third component in the cycle, a bacterial or fungoid colony, which converts the insoluble uric acid to the much more soluble urea which is then readily hydrated to ammonia; thus the nitrogen becomes available to the orchid.

We have, then, a conversation piece in this ingenious orchid; but it can also speak for itself, for when in bloom its relatively large white shapely blooms are attractive and beautiful, well worth a place in any orchid collection.

Diacrium bicornutum is a collector's piece in more ways than one; a final remark on its versatility is noteworthy. It often grows on rocks, sometimes so close to the sea that it is endangered by salt spray. This versatile, beautiful plant demonstrates the reward of giving and living in harmony with suitable other unrelated forms of life.

This species is difficult to import because fumigation affects it from inside and out; due to its hollow pseudo-bulbs. However, there are some plants in Sydney, growing freely on blocks of fibre. Here it houses no ants, but cultivation probably provides adequate nitrogen through the root system. It requires tropical conditions. G. H. Slade.

DENDROBIUM NOBILE

"Its very stems are so bright and transparent they form a beautiful object, and the effect of the bright green veins of the leaf sheaths seen through the semi-transparent skin is striking.

The flowers are unrivalled for delicacy of texture and gracefulness of form; at first nod-

ding, as if their slender stalks were unable to sustain their weight, and then, as they disentangle their ample folds, assuming a horizontal position, with the rich, trumpet shaped lip forming an apparently solid centre, they seem purposely to raise themselves to the distinct view of the beholder."—Dr. J. Lindley, about 1845.

• *SPECIE AND SPECIES*:—The word "species" meaning: "A definable group of individuals within a genus, with only minor differences among themselves," is a word which does not change from singular to plural.

Thus it is correct to say "There are numerous *species* of *Dendrobium* in Australia, but only one *species* of *Dendrobium* is found in Tasmania."

Notice the word species remains unchanged, whether singular or plural.

In botanical nomenclature the word is sometimes abbreviated to "sp." in the singular, "spp." in the plural. Thus *Dendrobium* sp. means "A *Dendrobium* species" while *Dendrobium* spp. means "two or more *Dendrobium* species."

The word "specie" means "minted coin", as distinguished from paper money or other currency. Specie has no meaning in botanical language.

It should not be used by Orchid growers, except of course, when referring to "coin of the realm."

• *EXHIBITING AT SHOWS*:—Members are sometimes in doubt as to what is required when a Show Schedule requires, say, "three *Cymbidiums* distinct colours" and to try and resolve the matter it was referred to the Committee of Judges, who have indicated that where they are called on to judge such a class they will consider that the word "distinct" when used in such circumstances will mean "different". Some members tend to argue that the word "distinct" can mean all sorts of things and if you will look at your dictionary you will see that they are quite right, but the Judges are of the opinion that the proper interpretation in these circumstances is to regard the word as they intend to and so, if you are entering in such a class, see that the colours of your flowers are in fact different. The Spring Festival held in the Sydney Town Hall made provision this year in the Schedule for "different colours" in an attempt to avoid misunderstanding.

What Is New Under the Sun?

A. R. PERSSON

• In the September issue of this Journal I wrote about growing Cymbidiums in a compost made from sawdust as something startlingly new. My friend, Bill Fishburn, of Ashfield, kept reminding me about his success with this compost. He knew that once I saw the phenomenal results he was achieving, I would join his friends who had already been converted to his faith.

The new slogan: Organic Nutrition, no fertilizer after potting, seemed intriguing. The certainty of *uniform* results appealed to me. So different from the usual formula of one part of this, two parts of that and a dash of something else; with ingredients difficult to obtain with any degree of uniformity.

Just to make sure that there would be no backsliding, Mr. Fishburn arranged a visit to brothers Tom and Aub Sessions around the corner. I have seen many noteworthy cultural results, but never anything quite like Messrs. Sessions'. *Every* plant carried spikes. Mostly four or five but up to nine per pot. The latter carried four spikes issuing from *one* bulb. And what spikes! Generous in girth and tall in stature. The resulting flowers were of very heavy texture, just the kind the American florist calls for.

This was not the result of a lifetime study and experimentation. Oh, no! Just two years! They happily took Bill Fishburn's advice to concentrate on George Dent's compost from the start.

Perhaps I should add that the plants are grown in cement tubs made on the premises on the "do-it-yourself" principle, and *the shading is extremely light*— $\frac{1}{3}$ shade, $\frac{2}{3}$ sunlight.

Then we have Mr. C. Hawes way back in West Kempsey country, another disciple of Bill Fishburn. He has just won at Coffs Harbour, the Grand Championship with Balkis Luath, A.M., with 10 and 13 flowers per spike. Also first prize for best two Cymbidiums; first best Yellow; first best Dark Colour. This result has just been repeated at Macksville, where he scored similar successes last year. Mr. Hawes tells me the same story; absolutely no fertilizer after potting.

To retain correct perspective I will not omit to point out that I have not seen our friend, Syd Cooke's, collection. Perhaps I would have been equally enthusiastic about his success,

though he uses a more conventional compost (reported in this journal last year), primarily tan bark with very liberal applications of poultry manure. Quite effective in acquiring Grand Championships and first prizes at Sydney Orchid Festival and numerous suburban shows. There would be scope for the betting fraternity if Sessions brothers could lug their cement tubs to the Show table.

In my anxiety to spread the news speedily about the newest of composts, I made a grave error. I wrote about growing Cymbidiums in sawdust compost. Entirely wrong. What I meant to write about was growing Cymbidium in *rotted wood*. When the sawdust has been dealt with according to Dent's formula for 4 months it is *not* sawdust any longer; it is just rotted wood.

Ah, rotted wood is Nature's own tucker for orchids, especially for Cymbidiums. Nothing better. The Cymbidiums that are lucky enough to have a potful of rotted wood feel quite at home as never before since their forebears were torn from that hollow tree trunk that Providence had ordained as their home.

Sessions Brothers have replaced some sawdust with wood shavings. They think it may be an improvement.

My friendly advice is that if you don't have time or facilities to "cook" the compost according to Hoyle as explained by Mr. Dent into a condition that it is rotted wood, then do not touch it at all. While sawdust is sawdust it is no good at all for growing anything whatsoever. Do not fall for the temptation to scrape together old sawdust that *seems* to be more or less rotted around the sawdust heaps at some sawmills. Such materials if actually rotted would be so many years old and exposed to all the rains that have fallen and leached away anything of value in nutriment. And, unluckily, there may be an admixture of sawdust more or less raw.

The slogan, "that not only shall justice be done, but it must also appear to be done", may we state conversely that not only shall the sawdust appear to be rotted, but it must, in fact, *be* rotted.

From my observations of the results of Dent's compost of rotted wood, it seems to be rich in nourishment. This compels consideration of the shade to be provided, especially dur-

ing October-March growing period. The relatively heavy ti-tree shading usually provided may be entirely satisfactory in the older types of composts, especially where feeding was only engaged in with fear and caution. The richer composts would create far *too lush* growths if shaded as much as leaner mixtures permitted. The growers that have been so successful with Dent's and other rich composts have found it necessary to reduce the amount of shade very considerably to encourage harder and riper growths and bulbs in order to obtain the spikes the plant is capable of producing. This is a lesson I am crediting 1959 with, at least as far as I am concerned.

In all probability we will find a few other orchids that will take kindly, perhaps avidly, to rotted wood. Those will most likely be the terrestrials. I shall inquire from my *Cypripediums*.

Whilst on the subject of composts, I have, on

numerous occasions, advocated experiment with the use of a mixture of $\frac{1}{2}$ vermiculite (exploded mica) and $\frac{1}{2}$ coarse (pea size) water worn gravel plus fertilizer with a view to eliminating the periodic repotting of orchids usually grown in fibre. After three years' use I am convinced that *Cattleyas* thrive in this medium. *Dendrobiums* do far better in vermiculite/gravel mixture than in anything else that I have tried. However, results were disappointing with *Vandas*, *Cypripediums*, *Phalaenopsis*, *Oncidium*s and most other types that dwell happiest on a block of fibre.

As no nutriment can be expected from either gravel or vermiculite, moderate and consistent feeding is essential.

Vermiculite, the coarsest grade, No. 5, as a base for an orchid-growing medium, is not new overseas. I would be pleased to hear from anyone in Australia who may have had some experience with this material.

Phalaenopses

Sir JOHN B. CHANDLER

• When the Secretary of the Queensland Orchid Society asked me to give a talk, I chose *Phalaenopses* as the subject, not because I am an authority on this genus, nor because I am particularly successful in growing them, but that perhaps I am less unsuccessful with *Phalaenopses* than with other varieties of orchids.

Phalaenopsis is a genus of orchids which I think has been given too little attention in Brisbane where they thrive so well. The flowers are really beautiful and, I think, comparatively easy to grow. Also, I find that *Phalaenopses* will never let you down for flowers. They flower regularly year after year and never miss, whereas many other varieties of orchids will flower irregularly. The flowers also last for a long time, either on the plant or as cut flowers, for which purpose they are very suitable.

Housing Conditions: Opinions are mixed as to whether *Phalaenopses* require glass house treatment or whether they can be grown in an ordinary bush house. My personal opinion is that in Brisbane they need some glass house protection. I know that Mr. Shaw and some other growers succeed with them in an open bush house, but Mr. Shaw is right on the coast and that possibly makes a difference.

I have had very little luck with them in a bush house and I know other growers who have had the same experience. Recently, I acquired some *Phalaenopsis* plants which had been growing in a bush house, where they were looking rather sick, but since having been in my glass house they have improved tremendously without repotting or any special treatment, other than watering. It may be that the species *Schilleriana* will thrive in an open bush house, as it seems to be much hardier than most of the hybrids.

Compost: My experience is that *Phalaenopses* will thrive, at least for a limited period, in almost any compost. I have grown them in osmunda, tanbark, tree fern, bark off trees and even sandy leafy soil. The chief compost problem, I find, is to maintain the roots in permanent or semi-permanent good order. My plants have a tendency for the roots to decay during or just after the flowering period, and for a long time I have been searching for a more permanent compost. My present preference is for thick tree bark cut into pieces, mixed with some broken crocks and a small quantity of tan bark. Whatever compost is used, it must be open and well aerated, while very good drainage is essential.

Continued on page 190

These I Remember

A. B. PORTER

• At the monthly meetings of the various Orchid Societies many fine displays of orchids are seen, and from time to time a special plant lingers in the memory. It may be a new hybrid, an unfamiliar species or a plant, particularly well flowered that catches one's eye, and the diversity of favour in Popular Vote selections clearly show that different people are impressed by different plants.

Looking back over exhibits at monthly meetings of the Orchid Society of N.S.W. a few of the many plants I have admired stand out more vividly in memory than the rest and I will recall some of these from meetings during the past year or so.

Dendrobium Mary Caine—J. Janesse, October 1958. This was not a flower of high quality but was one of those examples of a pretty variety so well flowered that it stood out from all competitions and won the popular vote. A smallish flower of a pretty pink shade with a red spot in the lip. The numerous flowering pseudo-bulbs were covered with flowers for most of their length converting the plant into a mass of delicate colour.

Odontoglossum Williamsianum—Mr. A. R. Persson, January 1959. We have seen this Central American species before but never flowered like this. Three long spikes, the largest with seventeen flowers, had a habit of spike similar to that of a slightly arching *Cymbidium*. The flowers are yellow, barred with brown, much like the colour of *O. grande* but considerably smaller.

Cynoches chlorochilon—H. Burley, February 1959. This species from Central America has green flowers whose shape strongly suggests the appearance of a swan. The plant exhibited carried a raceme of ten most attractive flowers with the long slender curved column like the neck of a swan. This species bears at different times, on the same plant, male and female flowers, the column of the latter being shorter.

Epidendrum dichromum—G. H. Slade, April 1959. The name *dichromum* means two colours referring to the distinct shades of Cattleya purple, the labellum dark and the sepals and petals much lighter but both clear attractive shades. This was a most attractive plant with six erect spikes of rather small but gaily coloured flowers. It is a native of Central

America; it will grow in Sydney without heat but appreciates some feeding.

Lycaste Skinneri—Mrs. K. E. Thompson, June 1959. Although one of the oldest orchids in cultivation, this species always attracts attention with its large tulip-like flowers each on its own stem from the base of the pseudo-bulb. The fact that it can be grown under *Cymbidium* conditions also increases its popularity. The present plant had six fine flowers of a most pleasing pink shade.

Cymbidium Rosarita x *Remus*—Mr. D. Lansley, August 1959. A very attractive seedling with an arching raceme of seven flowers of good size and shape. The colour was a rich pink, approaching red, with dark red spots on a white lip. The plant was still quite small and the inflorescence will no doubt improve when the plant is larger.

A particularly blue hybrid has been raised in Sydney, between *Vanda Wettsteinii* and *Vanda coerulea* var. *Balmoral*. The latter is a good tessellated variety of *coerulea* owned by Mr. A. R. Persson, while the hybrid, *Wettsteinii*, is already half *coerulea*. (*V. Wettsteinii* = *V. Burgeffi* x *V. coerulea*.) The *coerulea* in this *Wettsteinii* hybrid — which originated in Munich Botanic Gardens in 1938 — was the famous *V. coerulea* var. *Hennisiana*. This was probably the finest tessellated *coerulea* discovered. It is not surprising that the new Sydney raised hybrid is yielding some fine blue tessellated flowered *Vandas*. The plants have taken over five years to reach flowering size; this year, however, we may see more of them on the display bench.

• **N.S.W. ORCHID SOCIETY LIMITED AWARDS**:—Continued from Volume 23, No. 4, December, 1958.

Reg. No. 393.—L. C. General Maude x L.C. Valencia var. Balmoral. A.M. A. R. Persson. 27/4/59 (identical with Reg. No. 225 H.C.C. 25/8/52).

Reg. No. 394.—Cat. Memory 'Rapallo'. H.C.C. J. Chapman. 25/5/59.

Reg. No. 395.—L.C. Snowdrift. C.C. A. R. Persson. 25/5/59.

Reg. No. 396.—Cym. *Remus* x *Bartok* 'Wondabah'. H.C.C. L. Giles. 27/7/59.

The 1959 N.S.W. Festival

FRED JONES

• The Annual Orchid Festival arranged by the Orchid Society of N.S.W. Limited was held at the Sydney Town Hall from the 15th to the 18th September, 1959. A favourable year for Cymbidiums, together with more open space in the centre of the hall, saw a wonderful display.

The opening ceremony was performed by Alderman H. F. Jensen, the Lord Mayor of Sydney, who during his address pointed out that the Orchid Festival had taken a place in the cultural life of Sydney and at the same time transforms the sombre interior of the Town Hall into an orchid garden. Subsequently, the President of the Society, Sir John Hall Best, conducted Alderman and Mrs. Jensen on an inspection of exhibits.

The District Exhibit Competition saw a fine win by North Shore Orchid Society, which has now won the Birdsall Shield outright, with a setting consisting of a water wheel revolving against a stone wall. The exhibit featured a magnificent display of slippers supported by the various miscellaneous orchids, with the Cymbidiums massed on the other side of the wall. The most prominent of the excellent Cymbidiums included Swallow 'Daffodil', Sussex 'Laelia Sasso', a huge spike of *Cygnus* 'Janet', a lovely Louis Sander 'Kirribilli' with four spikes, Dorchester 'Jeanette', the showy Erica Sander 'Sailor Bay', Swallow 'Soulangiana', a Girrahween 'Gloria' with three spikes, Girrahween 'Enid', Princess Astrid 'Dorothy' and others. Amongst the Slippers were noticed Lady Emily, Aylsbury and Stornaway, all spotted types; Grace Darling, Noel Hardy and Goldrush, in the yellow tonings, together with Moira, Lady Kitty Laura and Langley Pride, F.C.C. The miscellaneous varieties included the pink *Phalaenopsis* Reve Rose, best in the Show, *Dendrobiums* Butterfly and Montrose, yellow with a pink suffusion, a Zeno with hundreds of showy flowers, *Jamesianum*, Sunburst 'Tain' and Gatton Monarch 'Henley', best in the Show; *Vanda* White Wings, terete growth with dozens of dainty white flowers, a *Phaius* with three erect spikes, various *Lycastes*, a magnificent *Angraecum eberneum* with four large spikes of distinct flowers, together with numerous plants of the native *Dendrobiums*, *D. Kingianum*, *D. fal-*

corostrum and *D. speciosum*. The exhibit was finished with foliage plants and ferns.

The Western Suburbs Orchid Society staged an excellent entry in the form of a natural setting featuring a cave and waterfall with the water running in a ravine. Excellent orchids were displayed to advantage, a feature of this exhibit being the very fine finish with mounted birds, butterflies, natural moss and other bush-land materials. This exhibit won Second Prize.

This year St. George Orchid Society presented a nice display built around a waterfall which dropped from the roof of a cave. A well arranged entry which unfortunately was weak in the miscellaneous varieties, and as a consequence suffered in the point score. Winner of the Third Prize.

The Eastwood District Orchid Circle this year utilised the theme of the well-known willow pattern china. This display contained excellent Cymbidiums, also the best *Cattleya* and best other specimen, but we have seen better displays from this Society. Awarded Fourth Prize.

The class for the Best Display by an Affiliated Society saw very enthusiastic and keen competition from the five societies which entered this class. A very close finish between two excellent displays by Sydney Orchid Society and Warringah Orchid Society saw Warringah win by virtue of the more varied and numerous miscellaneous varieties. The winning display included the following Cymbidiums: *Lycias* 'Chastity', Dorchester 'Jeanette', Swallow 'Daffodil', a brightly coloured *Cyzara* 'Merri-long', the popular Carisbrook 'True Rose', together with Edzell 'Elizabeth' and Girrahween 'Cronulla'. The outstanding miscellaneous plants included *Phalaenopsis* Schilleriana with a grand arching and branching spike, which set off various spikes of the white varieties: *Dendrobiums* *Jamesianum*, Gatton Monarch and Sunburst with delightful examples of *D. Kingianum*, *D. linguiforme* and *falcorostrum* showing to advantage, also a large *Vanda* Laelani, pink tonings with a brownish overlay. The display was completed with various *Anthuriums*, Foliage Plants and Ferns.

The Dos Pueblos Orchid Company presented a magnificent group of new Cymbidiums

artistically displayed before a painted background with a running waterfall. The most outstanding varieties noted were Etta Barlow, a small spike of four huge rounded flowers from a seedling plant, petals and sepals white, the lip marked with red; Rosarita 'Maybelle', an arching spike of ten medium sized rounded flowers, white petals and sepals with a pink marked lip; La Novia 'Strathmore', H.C.C., seven spikes of lovely pink flowers; Judy 'Superba', an erect spike of bold pink flowers; Sayonara 'Aurealin', a distinct yellow flower with a pink suffusion, the lip heavily marked with red; Rosarita 'Radiance', fifteen large pink flowers with a pink lip carried on an arching spike; York 'Le Cumbra', yellow petals and sepals with a red marked lip; Cooksbridge 'Orange', sixteen large spikes of showy flowers; Judy 'Tamsin', eleven medium sized shapely flowers, petals and sepals white suffused with pink and a red marked lip, granted an H.C.C. at the Festival; Rosarita 'Glory', five spikes of bright pink flowers; also Rosarita 'Rubens', with dark reddish pink shapely flowers. This exhibit was embellished with distinct Alocasias in variety, together with various Sanseverias, Philodendrons and Calatheas. Awarded a Silver Medal.

Mr. John Bisset arranged an attractive trade display with a background of large panels painted in contemporary colours. Essentially a Cymbidium display, the more outstanding plants included Ramley, a large bold green flower with a heavily marked red lip; Cariga 'Sorrento' with four strong spikes of clear yellow flowers; Sussex Moor with two spikes of closely set shapely flowers, deep green with a red lip; the well-known Cygnus 'Opalescent'; two large plants of Balkis 'Luath'; Swallow 'Hebe'; a lovely spike of pale yellow Memoria Albertii; a reddish pink Cooksbridge together with Princess Astrid 'Dorothy' and Thora, A.M., a pastel green. The exhibit was finished with various Cordylines, Anthuriums, Dracaenas and Ferns. Awarded a Bronze Medal.

Mr. F. Slattery staged an interesting trade exhibit. The more prominent Cymbidiums noted were five long spikes of the pink Rio Rita 'Radiance', which framed a spike of the deep green Miretta 'Matchless' to advantage; Dorchester 'Jeanette'; the deep yellow Gosoon 'Sailor Bay'; Sussex Moor 'Belfields'; a good green with a red lip Cygnus 'Opalescent'; a strong arching spike of Rusper 'Waverley' contrasted with a bright reddish pink Aldis Lamp 'Arncliffe'; Rosita x Remus, a bright pink with

a red lip, an attractive flower; together with Balkis 'Luath', Balkis 'Elouera', Girrahween 'Gloria' and others. This display was finished with Crotons, Ferns and Anthuriums. It was awarded a Bronze Medal.

The Qantas display featured cut flowers from various overseas growers. The distinct shapes and colouring created great interest amongst the visitors to the Festival. The following varieties were some of the more interesting types: Aranthra James Stortie with spidery reddish blooms; Vanda Tan Chay Yan, apricot with a pink suffusion; a very shapely Vanda Nora Potter, a bright pink with a brownish lip; a distinct Renantanda Orange Boven and a spectacular vase of Aranda Deborah with dozens of spikes of yellow and brown flowers. The Dendrobiums included Curlylocks with twisted petals; New Hawaii, a pale mauve antelope type; also New Hawaii 'Alba', a pure white form and Madame Pompadour with shapely reddish flowers. Amongst the Vandas, Sanderiana with lovely colour and shape, Walter Oumai, pink and brown, and the well-known Nellie Morley, stood out.

This year the Guessing Competition, a glass-house with Cymbidiums and Foliage Plants, was arranged in association with the Lions Club of Sydney. At the time of writing it would seem that over £1,000 would be raised to assist the Royal Blind Society.

Owing to the large number of classes it is not possible to mention all the prize winners, the following notes being the writer's impressions of the First Prize Winning Exhibits:

GRAND CHAMPION CYMBIDIUM—Dorchester 'Jeanette'. Mr. S. G. Cooke. A huge well grown plant with a single arching spike of ten medium sized shapely flowers. Petals and sepals white, the lip white, with a reddish spotting.

RESERVE CHAMPION CYMBIDIUM—Balkis Luath. Mr. S. G. Cooke. A strong plant with two semi-erect spikes totalling seventeen rounded flowers. Petals and sepals white, the lip white spotted with red and flushed with pink.

BEST RED CYMBIDIUM—Robin Redbreast 'Lilyvon'. Mr. A. Chalmers. A smallish spike of eight colourful flowers of attractive shape. Petals and sepals a dark reddish shade, the lip flushed and spotted with red.

BEST GREEN CYMBIDIUM—Esmeralda. Mr. A. Chalmers. A medium sized plant with an arching spike of twenty-two showy

flowers. Petals and sepals a good clear green, the lip marked with yellow.

BEST YELLOW CYMBIDIUM—Manobier Castle. Mr. W. Brinsley. An arching spike of nine open type flowers. The narrow segments, petals and sepals a clear yellow shade, the lip a darker yellow.

BEST SPECIMEN CYMBIDIUM—Cooksbridge 'Orange'. Dos Pueblos Orchid Company. A magnificent display from sixteen large semi-erect spikes with countless bold open flowers. Petals and sepals a buff shade, the lip heavily marked with red.

BEST OTHER SPECIMEN — Cattleya Raynham. Mrs. S. Medcalf. A lovely specimen plant with a compact display of fifteen medium sized flowers. Petals and sepals a pale mauve, the lip dark purple with yellow markings in the throat.

GROUP OF SIX CYMBIDIUMS—Mr. S. G. Cooke. A well grown and flowered group which blended both colour and shape to make a very attractive display. The following plants comprised this group: Firebird 'Jean', a spike of large bold reddish flowers; Cygnus 'Opalescent', two large spikes of pastel green flowers which contrasted with the three spikes of yellow blooms from Irish Melody, also Independence Day 'Beryl Jean', palest yellow or cream with a pinkish lip; the well-known pink flushed Istanbul 'Isobel', and a brightly coloured Sussex 'Laelia Sasso'.

GROUP OF TWO CYMBIDIUMS—Mr. S. G. Cooke. A superb group which comprised Dorchester 'Jeanette', Champion of the Festival, and Balkis 'Luath', the Reserve Champion.

GROUP OF THREE CYMBIDIUMS FOR COLOUR—Mrs. S. Malone. A nice entry with the usual colour combination, included Woodpigeon, yellow with a yellow lip, Carisbrook 'Brick', a semi-arching spike of red flowers, and Midlothian 'Greensleeves', a pendulous spike of green flowers with a contrasting red lip.

GROUP OF FOUR DECORATIVE CYMBIDIUMS—Mr. S. G. Cooke. An excellent display of large spikes with hundreds of flowers which comprised the following varieties: Girahwen 'Zenzi', four spikes of yellow, red lipped flowers; Golden Nubian, six spikes of golden yellow blooms; Cygnus 'Opalescent', four strong spikes of pastel green flowers; and Cygnus 'Janet', four long spikes of showy flowers.

BEST CYMBIDIUM EXHIBITED BY A NOVICE—Dorchester 'Jeanette'. Mr. H. J. Davidson. An arching spike of nine large shapely flowers. Petals and sepals white, the lip white with red markings.

BEST COLOURED CYMBIDIUM EXHIBITED BY A NOVICE—Ceres 'Girahween'. Mr. F. H. Smith. An erect spike of fourteen showy open flowers. Petals and sepals a dark reddish pink, the lip white with reddish markings.

BEST CYPRIPIEDUM — Paeony 'Regency'. Mrs. Hayter. A large rounded and shapely flower. The dorsal white heavily overlaid with a dark reddish bronze shade, the broad petals a red bronze, the ventral green. Granted a Highly Commended Certificate.

BEST CATTLEYA—Cattleya Poncarra. Mr. P. Reedy. A strong plant with two good attractive flowers. Petals and sepals a soft pink, the large dark purple lip having yellow markings in the throat. A nicely shaped flower.

BEST DENDROBIUM—Gatton Monarch 'Henley'. Mr. L. Sasso. A nicely flowered plant with two canes of large shapely blooms. Petals and sepals a dark mauve shade, the lip cream tipped with mauve and having a dark plum eye.

BEST VANDA — Rothschildiana. Mr. H. Mills. An erect spike of ten medium sized rounded flowers. Petals and sepals a pale mauve overlaid with a darker mauve tessellation, the lip violet. A lovely flower with overlapping petals and sepals.

BEST AUSTRALIAN NATIVE ORCHID—Dendrobium Kingianum. Mrs. K. E. Thompson. A well grown and freely flowered specimen plant which carried dozens of sprays of dark reddish mauve flowers.

BEST OTHER ORCHID — Phalaenopsis Reve Rose. Mrs. F. Spurway. A strong plant with a graceful arching and branching spike with numerous shapely flowers. Petals and sepals a deep pink, the lip yellow with reddish markings.

BEST CYMBIDIUM SEEDLING — (AUSTRALIAN)—Elouera. Mrs. G. Tant. An improving plant with a semi-arching spike of eight large rounded flowers. Petals and sepals an off-white shade overlaid with a pink suffusion, the lip heavily marked with red.

BEST IMPORTED CYMBIDIUM SEEDLING — Ann Green 'Lady Francis', Mr. C. Phillips. A small improving plant with a semi-arching spray of eleven bold flowers.

Continued on page 190



CYMBIDIUM x BALKIS var. 'LUATH'

Reserve Champion Orchid Society of New South Wales' Festival, September, 1959



General view from the stage of the 1959 Orchid Festival, arranged by Suburban Orchid Societies.

North Shore Orchid Society's winning display, arranged by the runner-up, Western Suburbs Orchid Society, from St. George Orchid Society and the Eastwood District Orchid Society in the background respectively.



...Town Hall. The four Island exhibits were
...and a water wheel, can be seen in the right background. The
...left foreground. Third and Fourth Prize winning exhibits
...Circle, can be observed in the right foreground and right



SOPHRONITIS COCCINEA.

A brilliant and easily grown orchid for outdoor conditions.



Illustration showing a young seedling sprouting six new growths. Multi-growths are rare when using conventional composts. See article "What Is New Under the Sun", page 175.



Two of the shapely flowers from small seedling of *Cymbidium* x *Etta Barlow* var. *Enchantress*, displayed by Dos Pueblos Orchid Co. at the N.S.W. Orchid Festival.

Sophronitis coccinea and its Allies

G. H. SLADE

• There are three species of the genus *Sophronitis*, all Brazilian. Like many other Brazilian orchids, e.g., *Cattleya Loddigesii*, *Oncidium varicosum*, etc., they are very easily grown in Sydney; bush house or outdoor treatment is quite satisfactory.

According to Gardner, who studied them in Brazil in 1836, they grow at an elevation of four to five thousand feet. He observes that in the conditions under which they grow "the climate is much cooler than Rio, the thermometer in May and June falls to freezing point just before sunrise. The hottest months are January and February when the temperature rises to 84 deg. F., when thunderstorms occur almost daily, followed by a delightfully cool evening."

Thus they require only regular watering to make them at home here in Sydney.

Sophronitis coccinea (syn. *S. grandiflora*) is the showiest of the three species of *Sophronitis*. It flowers in winter when its brilliant shapely blooms make it a delightful object. They last fully six weeks in perfection. Can be readily cultivated on a small thin slab of treefern fibre or on a block of wood, for while they require regular watering, they benefit by drying out daily; for this is a certain way to make the plant flower freely and produce healthy root growth.

The flower spikes of one, but occasionally of two, flowers appear with the young growths, these appear very early in the season so that

the plant is in flower from July to September. All the *Sophronitis* are small—*Sophron* means modest in Greek—so they require only a minimum of space. The plant illustrated has been growing on a piece of 4in. x 2in. x ½in. treefern fibre for several years and continues to increase in size; the block is permeated with numerous roots.

The other two species, which have flowers smaller in size, are charming miniatures with equally brilliant colouring as *S. coccinea*.

Sophronitis cernua produces a head of 5-8 brilliant scarlet half-inch diameter blooms in May. It grows well outdoors on a fibre block.

Sophronitis violacea produces inflorescences of one rich violet magenta flower in June; it is a decorative and worthwhile miniature orchid. Fibre block culture suits it well.

Sophronitis coccinea has been crossed with numerous *Laelias* and *Cattleyas*, with which it is closely related, to produce the well-known *Sophrrolaelias* and *Sophrrocattleyas*. In these, the brilliant scarlet, desirable shape and durability of the *Sophronitis* has been used to advantage. *Sophronitis coccinea* has also been crossed with *Epidendrum radicans* to produce the brilliant *Epiphronitis Veitchii*; now well known in Sydney collections. This is probably the best of the *Epidendrum* hybrids.

Species have a special charm, *Sophronitis coccinea* is one of the most shapely, colourful, appealing and easily grown orchids in cultivation. It should grace every collection.

Orchid Breeder gave Interesting Address to Coffs Harbour Orchid Society

Reprinted from Coffs Harbour Advocate.

• Prominent orchid breeder and experimentalist, Mr. A. R. Persson, gave an enlightening address at the Horticultural Society's August meeting.

The meeting was held at the Plantation Hotel to coincide with, and augment, the attractions and functions organised to entertain the many visitors to the district for Tourist Travel Week.

Opening his talk, the speaker, who took as his subject "Orchids in Other Lands", said

that as orchids flowered in late winter and early spring it was relatively difficult for anyone visiting other countries in a given time to see and inspect any more than just a few of those countries where orchids would be blooming at the time of the visit.

Orchids, Mr. Persson said, while cultivated to some extent the world over, the greatest area of commercial cultivation was to be seen in Hawaii, the west coast of America and the east coast of Australia.

These countries, having a good standard of living, were able to pay the expensive prices which were asked for the high quality, selected hybrids.

Cymbidiums, he said, did not like climates of even temperatures. For that reason they were principally grown in those localities where there was a clearly defined division between winter and summer.

He instance the east coast of Australia. In the warmer, more tropical regions nearer the equator, *Dendrobium*, *Vandas* and other genera flourished.

Japan has a comparatively small orchid potential. During World War II most of the plants became neglected and died out, and it would be many years before this loss would be replaced. This applied to many other Asian countries affected by war.

Honolulu was, according to Mr. Persson, the Orchid growing centre of the East. Varieties grown were principally *Dendrobiums* and *Vandas*. These are raised in hundreds of thousands and exported to America, where they commanded very high prices.

Describing his visit to Dos Pueblos Orchid Co., California, which is perhaps the largest commercial orchid grower in the world, Mr. Persson said that it was an amazing place.

Here are many acres of open beds containing hundreds of thousands of plants. They are heavily fertilised, using dried blood and superphosphate; watered at the rate of two inches per week. Young seedlings are artificially lighted to ensure 16 hours of daylight and eight hours of darkness. The lighting is controlled by a selenium cell.

Each year new seedlings are raised, these are transplanted from flasks in which the seeds are sown into sphagnum moss. They are eventually transferred to open beds where they are left until blooming; usually 12-18 months. After three years' development in the beds, they are broken up. The best are replanted in the same beds after the compost has been partially renewed.

Although Australia exported each year a quantity of orchids they would be a drop in the ocean compared to those raised in the Americas and Hawaii.

Conditions in England taxed growers' ingenuity. The speaker said he had nothing but admiration for the way the English had surmounted the difficult conditions.

Most of the growers are found in the south as smog laden skies and shorter hours of sun-

light in the north made it very difficult to successfully bring plants to blooming. It was essential to have the plants in heated glass houses practically all the year round. This made them tender and susceptible to climatic changes

France, Belgium, Germany and other countries on the Continent had their quota of growers, but to no great extent.

Holland, France and England were noted for their work in breeding and hybridisation.

England was the first country in the world to successfully carry out this most complicated and exacting part of the breeding cycle of many new varieties and crosses.

Dealing with orchids and their culture on the east coast of Australia, Mr. Persson said that some very outstanding developments had taken place in recent years; especially in and around Sydney.

Each year more and more growers are entering the field, cultivating *Cymbidiums*, *Dendrobiums*, *Vandas* and many of our native orchids.

Mr. Persson dealt briefly on the subject of composts, stressing the fact that most growers had their own pet theories in this matter.

Some use tan bark as a base, others German peat moss, rice hulls, wood shavings, sawdust and both artificial and organic fertilisers. Some water heavily; others rather sparingly. Some use maximum sunlight, others shade their plants to varying degrees in keeping with the climatic conditions prevailing at a given period of the year.

Some very interesting and beautiful slides were shown at the conclusion of the talk. These depicted orchids in all their natural glory, in many parts of the world.

Mr. R. M. Smith proposed a vote of thanks to the speaker. He said that we had been honoured by his presence and that Mr. Persson's attendance alone would ensure an attentive and appreciative gathering anywhere. Speakers of such a high standard were few and far between and Mr. Smith felt sure that everyone had learnt quite a lot from Mr. Persson's talk.

After a very nice supper, served by the hotel staff, the meeting terminated, with members feeling that this was the best meeting of the year.

Great credit must go to Mr. H. J. Cann, on whose shoulders fell the burden of the organisation of such an excellent contribution to our Tourist Festival for 1959.

Demonstration of Judging

• The four judges were seated on a raised table was chosen from among those on the plant table to be judged. Mr. Castator said that there are roughly two kinds of judging—award judging and competitive judging. Tonight's demonstration is to be of award judging which is conducted at our regular meetings.

The first thing we do in a judging session is that each judge will appraise each plant and decide whether in his opinion it will come to 75 per cent. of what his ideas are of perfection. If we have fifteen judges in the room and just one of them says that he wants a plant judged, it will be judged.

The four judges on the programme then proceed to judge the plant that has been placed on the table and Mr. Castator continued to explain the procedure. He said, in part, we have selected the plant you see, thinking that it is a plant which normally may come to 75 per cent. There is no set picture of perfection—that is based on the individual Judge's experience and what his ideas are. There is no previous discussion among the judges. They do platform in front of the audience and a plant not know the owner of the plants being judged. There is no set number of judges to work on each plant. We have a committee type of judging and if we are not too busy as many as 15 of our judges could judge each plant. The minimum would be three judges.

In effect, ours is a committee form of judging, aided by a point score sheet. The point score sheet is divided this way—on form of flowers the various categories add up to 30 per cent. of the total points. The judges will select the best flower on the spike, and usually this is decided upon quite easily. The possible 30 points total that can be given to a flower for its form are divided as follows—

General Form	-	-	10	points
Dorsal Sepal	-	-	5	"
Labellum	-	-	6	"
Petals	-	-	5	"
Ventral Sepals	-	-	4	"

30 points

it might have been possible for a flower to receive as high as 77 points total but be lacking in form. We also have 30 points for colour and, likewise, independent of form, the plant must come up to 75 per cent. or $22\frac{1}{2}$ points of the colour requirement before it can be given an award. We do not combine form and colour to reach the 75 per cent. minimum. Many rather poorly formed flowers have vivid colour and under the old system it would have been possible for them to receive a high score on colour. Now it is not possible for such flowers to take an award. We feel this has worked out very well indeed.

The breakdown of the 30 points possible for colour is—

Colour	-	-	-	5	points
Sepals and Petals	-	-	-	17	"
Labellum	-	-	-	8	"

For the purpose of the demonstration, the judges' scores were averaged after they had scored the flower on form and after they had scored the colour and it was determined that in each case it had reached at least the required $22\frac{1}{2}$ points. Ordinarily the entire scores would be taken before the score sheets would be averaged. There is no discussion between the judges while they are working on the plant. If one judge should be considerably off from the other scores—that is, as much as five points—his score would be discussed with him. If he wishes to revise his score, he will do so. If not, it will stand. If one judge should be extremely far from the average score and does not wish to revise his score, he may be replaced.

The remaining possible 40 points on the score sheet are:

Size of flower	-	-	10	points
Substance	-	-	8	"
Habit of spike	-	-	5	"
Arrangement of flowers on inflorescence	-	-	7	"
Number of flowers on inflorescence	-	-	10	"
				40 points

One of the rules adopted by the Society during the past year is that no flower can receive an award unless it received a minimum of 75 per cent. or $22\frac{1}{2}$ points on form, irrespective of anything else. Before this rule was adopted,

In the case of size of flowers, the total 10 possible points are given for flowers measuring five inches or more. For each $\frac{1}{4}$ in. less than five inches we drop $\frac{1}{2}$ point. The measurement of the flower is determined by the entry clerk, and

the point score is arbitrarily determined by dropping the $\frac{1}{2}$ point for each $\frac{1}{4}$ in. less than five inches—so that this score will be the same for all judges for each flower.

The score for "number of flowers on spike" is also arbitrarily determined. We give the 10 possible points for a spike of 14 flowers and drop seven-tenths of a point for each flower less than 14, so that a spike of five or six flowers will lose points, even though they may be superb flowers. A spike with just one flower would be given .9 of a point for the number of flowers.

The judges were given the name and parentage of the particular plant by the entry clerk. However, Cymbidium Society judging is not conducted by type and breeding. The spike is judged as it stands, by judges who have seen a great many Cymbidium plants, according to their idea of perfection, without particular reference to its breeding, although miniature Cymbidiums are judged using another score sheet entirely.

The question was raised as to what would be done if a Cymbidium spike was shown that was, for some reason or other, entirely different from the ordinary concept and was very outstanding. In that case, it might be awarded the David W. McLean Award of Distinction.

The question was asked of Mr. Castator as to whether the fact that a spike was fastened or tied to a stake would disqualify it. The answer was that the judges would notice how it was fastened and would give it a lower point score for "habit of spike" if it appeared to need too much propping.

Mr. Castator also mentioned that unopened flowers are not counted, when counting the number of flowers on a spike. Damaged flowers are also not counted.

Another question was, will the judges consider a spike that has been cut from the plant? The answer was that cut spikes will be judged if in the opinion of at least one judge present has saved the Society from awarding plants the spike will receive a total of at least 75 points. However, it is requested that a cut spike be firmly anchored into a vase so that it can be examined by the judges.

A plant of Cymbidium Bengal Bay was then scored by the judges, which reached a total point score of over 75 points. However, it did not reach the required $22\frac{1}{2}$ points on form of flower or colour, so would not be an award winner. Mr. Castator concluded his remarks by saying that previous to this year, the Bengal

Bay would have been awarded because it did have a magnificent spike habit and had 15 flowers and a total score of over 75 points. The new requirement of at least 75 per cent. of the points possible on both colour and form which it felt should not be awarded, yet added up to 75 points in total or more.

• *ORCHID CLUB OF SOUTH AUSTRALIA—SPRING SHOW, 21-23 SEPTEMBER*:—The President, Mr. Neil Christoph, welcomed Lady Playford wife of our Premier and Patron, who opened the proceedings.

The blooms, modest in number by interstate standards, contained many of export quality and were tastefully arranged, with usual and some unusual background supplied by the Botanic Gardens and by our members.

The Judge, Mr. George Leverett, a member of our club from Victoria, remarked that it was too early for many Cymbidiums, as could be seen from the number of unopened buds.

Blue tickets were awarded to Mr. Ray Wayne's Best Cymbidium Cassandra "Toxteth" and his Cymbidium Ethel Ward was best yellow.

Best Pink Cymbidium was Cyzara variety Remembrance to Miss Ida Thomas.

Best White Cymbidium was Cassandra var. Snow Queen to Miss Ida Thomas.

Best Green Cymbidium was Atlas to Wesley Harris.

Best Cattleya was B.L.C. Marie-Marie to Mrs. C. H. Homes.

Best Cyripedium was Torres.

Best Miscellaneous to Mr. Frank H. De Rose for a well grown Phalaenopsis hybrid No. 44 x Jane L. Kingsbury.

Many other plants showed evidence of good cultivation; Mr. De Rose's lovely pink Phalaenopsis Schilleriana x Ruby F.C.C. would have benefited by another two weeks for development of buds. This foundation member's exhibit included many delightful examples of Lycaste Skinneri and other genera, and there was no sign that his fingers lacked greenness.

Several Dendrobiums—hybrid nobile type—Indian and natives, added variety and charm.

Odontoglossum pulchellum, Cyripedium venustum and spicerianum, Oncidium splendendum, Sophronitis grandiflora, three well grown Phaius Tankervilleae and two plants of Zygotepalum Mackayii all helped tremendously in our floral feast.

Plastic Pots

• The use of plastic materials in the production of moulded plastic pots is a new and interesting application. Plastic moulding companies have looked for a means of disposing of their mixed colour reclaim. It is now used to economically produce plastic pots which are of diversified yet attractive colours. The pots have great interest to orchid growers.

Not all plastics are suitable; however, polystyrene is a much used plastic which is completely inert to water, quite non-toxic to plant life, so that it is an excellent material for the production of plastic containers for cultivation of orchids and house plants.

There are several significant facts to be said for plastic over terra cotta for pots. Plastic pots filled with a normal moist compost are actually warmer than terra cotta pots, as the former are dry on the surface, which is thus at the temperature of the dry bulb, while the latter, being moist, are that of the wet bulb. The difference can be over ten degrees. Most of us know of the Coolgardie safe, which keeps butter remarkably cool so long as the container is kept wet. Terra cotta pots operate exactly the same way, so that the compost is kept degrees cooler than the surrounding conditions.

The abovementioned cooling effect is due to the evaporation of water from the moist surface of the permeable ceramic pot. Thus there is a constant migration of water from the compost through the walls of the pot to the outside, where the water evaporates; so that soluble materials, including salts, gradually concentrate and crystallise. They build up and react with one another to produce insoluble salts. Over a time these build up to produce the white efflorescence which is often seen on terra cotta pots, particularly those which have been in use for some time. Any build up of salts is highly undesirable for plants. They require salts in the correct concentration, absorbing some, excreting others.

Growers have various means of ensuring the correct concentration such as regular watering and fertilising; however, it is important that some latent outside influence such as evaporation on the surface of the terra cotta pots does not impose conditions which can be beyond the grower's skill to control.

Plastic pots have no permeability at all so that the condition of salt build up does not occur. It is thus much easier to maintain con-

trolled conditions in the growing medium.

The weight of plastic pots is much less than that of terra cotta pots; this facilitates their handling and storage.

Their gay, unusual and abstract colours of windswept design can greatly add to the attractions of orchids and of indoor plants. So many variations in colour are available that growers are free to use their artistic skill in having a suitable pot for the plant it holds, or making an attractive ensemble of plants for display or indoor attraction.

At the nursery we have carried out some interesting experimental work by placing plants in identical compost and conditions in terra cotta and in plastic pots. The following advantages have been found:

1. Plastic pots remain clean and free of algae or of white efflorescence, while terra cotta pots soon become unsightly.
2. The growth of plants in plastic pots is noticeably superior to that in terra cotta pots. After several months identical growing in the same compost, the plants were taken out of the two kinds of containers to find that the root system was almost twice as extensive in the plastic pots compared with those in the terra cotta pots. It was noted that the roots in the plastic pots were pure white, whereas those in terra cotta pots were blackened, particularly where they came into contact with the sides of the pot. This was probably due to the high concentration of salts which builds up on terra cotta pots, as mentioned above. The root growth of the plants in plastic pots was noticeably more uniform than in the terra cotta pots. This is probably attributable to the uniform concentration of the plant material which occurs in a container which is not permeable and thus not subject to continuous evaporation in one place. In plastic pots the only surface for evaporation is the surface of the soil itself as this is the area which is regularly subjected to watering; minimum build-up of salts occurs on the surface.

We believe that plastic pots will greatly benefit growers in exercising their skill in cultivating not only orchids but other container grown plants as they impose minimum conditions which are outside the control of the cultivator. However, it is noteworthy that it is

preferable to water any pot from the top rather than to supply its water requirements by filling a saucer and allowing the water to soak up to the surface. Surface build-up of salts would be the result; this is undesirable.

—*Dos Pueblos Orchid Co. (Aust.) Pty. Ltd., Dee Why.*

Phalaenopses: continued from page 176

Containers: Most of mine are grown in pots, which I find most convenient. I use fairly large pots as their weight will support a large plant with a heavy flower spike. However, I have seen some plants grown by Mr. Alec Blair and others in much smaller containers, carrying excellent flower spikes and with very healthy root systems. Mr. Shaw thinks they do better in wooden baskets, and he may be right. So far, I have not had great success with baskets, but am trying some again this season. My system of cultivation has made somewhat frequent repotting necessary, but while *Phalaenopses* will tolerate repotting quite well, they are probably better if they can be left undisturbed. Plants which have been left undisturbed appear to give more blooms, but my experience seems to indicate that larger and better quality flowers come after repotting.

Watering: *Phalaenopses* do not like being dry, but equally do not like a continually wet compost. They appear to like a moist atmosphere, although I have seen them growing successfully in Townsville where the atmosphere is fairly dry. In the growing season I water my plants almost every day, but usually with a fairly light spray. Some growers advise care not to wet the *Phalaenopses'* leaves, but I wet mine regularly and am inclined to think it helps rather than hinders them. After flowering, I gradually reduce the water supply to give the plants a rest until new roots appear, when water is again freely given.

Light: *Phalaenopses* like fairly shady conditions, but too much shade appears to produce prolific growth and fewer flowers. I have one plant which was grown in a very shady position and has leaves over twenty inches long, but the number of flowers is disappointing.

Fertilizing: Being very vigorous growers, *Phalaenopses* appear to like plenty of fertilizer. This season I have watered mine each week with Aqua-sol, and results seem satisfactory.

Pests: *Phalaenopses* do not appear to be unduly troubled by pests, although on occasions I find that a young leaf will die off. Usually, when this happens, the plant stops growing

from the main head but sends out one or more side shoots, which usually grow well. Thrips will play havoc with the young leaves, but as a rule these only appear if the conditions are too dry. Care should be taken when the plants are resting as I have found that red spider, and particularly a variety of mealy bug, can be dangerous at this stage.

Propagation: Apart from seed, new plants will sometimes shoot from a flower spike. At the present time also, I have a young plant of *Phalaenopsis Stuartiana* growing from a root of the parent plant. When a plant grows large, the top can be cut off below some roots and, with care, this top will grow while the original plant will send out one or more side-shoots, which soon grow into good plants. I think cutting should take place when the plant is rooting vigorously, probably in November or December. Mr. Shaw has already given a description of this process.

I wish to emphasise that I have not tried to tell you how to grow *Phalaenopses*. What I have done is to recount some of my own practices in the hope that it may interest some of you, particularly those who have not yet grown them. I do not think that any general rule can be laid down for the growing of these or any other variety of orchids; each person's conditions and practices vary, and each grower must use his own judgment, but I hope these notes may be of interest and perhaps of use to someone.

—C/- Queensland Orchid Society.

The 1959 N.S.W. Festival: continued from page 180
Petals and sepals an off-white, the lip flushed with pink and marked with red.

BEST GROUP OF ORCHIDS AND FOLIAGE PLANTS DISPLAYED IN AN AREA 6ft. x 7ft.—Mr. A. Birdsall. A fine exhibit which consisted mainly of excellent *Cymbidiums*, well grown and presented. The outstanding varieties were Dorchester 'Jeanette', Adele Sander 'Narcissus', Stonechat 'Elouera', Spartan Queen 'Merrilong', Tomerong 'Halstead', yellow with yellow lip, Esmeralda No. 1, Edzell 'Elizabeth', together with two plants of Balkis Luath and Firebird 'Jean'. The miscellaneous plants included the pink *Cattleya Cliftonii* 'Magnifica' and *Laelia-cattleya* Adina 'Chastity', a shapely pink flower, *Lycaste Skinneri*, several native *Dendrobiums* and a number of huge colourful *Anthuriums*. The exhibit was finished with foliage plants and ferns. Granted a Silver Medal.

Common Orchids have Special Interests

YORK MEREDITH

• Emphasis is so often placed on rare orchids that the special interests of common orchids are sometimes overlooked. Common orchids are adaptable orchids; such orchids grow under such widespread conditions that their adjustment to the various ecological and climatic conditions is highly interesting and horticulturally useful.

Cattleya Loddigesii, for instance, is found over an immense area in tropical South America. It is found over a wide area in Brazil, a country considerably larger than Australia. It is often collected in great quantities from the bushland to decorate churches and similar large buildings. It grows with equal facility from the Organ mountains to the River Plate; from the Atlantic to Uruguay: sometimes on rocks, sometimes on trees; in shade or in open tropical sunshine. This orchid, common in its native habitat, is therefore of great interest; for some of the areas it inhabits are of similar climate to our own. Here in Australia it is accommodating, it will as readily grace a rock garden, a Frangipanni, a paling fence or a sandstone wall, as it will a glassohuse. Its shapely lilac flowers with lemon shaded lip are durable and firm; they last much longer than most *Cattleyas* and rank with the best of this lovely genus. It produces 3-5 blooms on each inflorescence. There are numerous fine varieties showing various colour mutations.

Odontoglossum citrosimum (Syn. *O. pendulum*) is another interesting common orchid. It, too, covers an extensive range in its native habitat, Mexico. Its discoverer, the explorer Roezl, describes how he found it growing "in immense quantities in oak trees scattered over the open park-like plains": he continues, "great was my surprise to see the trees clothed with a profusion of orchids, which proved to be *Odontoglossum citrosimum*, whose pendulous spikes, a yard long, were adorned with innumerable white and rose flowers, which perfumed the air with their delightful fragrance. The stoutest branches of the oaks were literally loaded; it was a pleasure to see the profusion of flowers produced by these plants, a single spike bearing upwards of thirty flowers. During several day's march we noticed that all the oaks were clothed in this way with this same orchid,

which flowers the more freely it is exposed to the direct rays of the sun."

This "common orchid" ranks among the loveliest of the whole orchid family. It has pea-green leaves that withstand sunshine completely, the more sun they receive the greener they become. The pseudo-bulb looks as if carved from green wax or polished jade. They are always smooth and shapely, attractive in themselves. The flower spikes appear with the young growth in October. In this respect *Odontoglossum citrosimum* is different from any other *Odontoglossum*; for although aberrant, it is a true *Odontoglossum*.

How many of us a few years ago would have imagined growing an *Odontoglossum* on a paling fence facing north? Yet this wonderful "common orchid" is so adaptable it must be among the hardiest of any of the numerous orchids one can cultivate in Sydney. It withstands drought for months on end; it loves full sunlight; it flowers freely with shapely perfumed flowers. What more can a plant provide?

Laelia autumnalis is another common orchid from Mexico. A friend recently described that he could have collected a lorry load of this remarkable plant. It inhabits a widespread area of the Mexican highlands under varying situations "on bare rocks, on stunted trees, often in immense masses, but always exposed to the full force of the sun and rain."

This lovely orchid is growing freely in a situation chosen as the most windswept and sundrenched in my garden in Manly. No ordinary garden plant can withstand the westerlies that funnel past this particular spot, for they come straight across the harbour unimpeded, and are then concentrated by the side of the house: yet *Laelia autumnalis* revels in this situation, producing numerous thick roots and fine healthy growths.

The inflorescence of this lovely attractive orchid is a spike about two feet long with five to ten fragrant flowers of deep rose purple. They are shapely and beautiful. The plant increases rapidly—another reminder that common orchids are useful, valuable and interesting.

Over the Fence

"JUM"

• "That you, Frank? I rang to tell you that your piece of Etta Barlow is over here. Yes, that's right—the seven hundred and fifty quid job. Yes, I'll be home all the morning. No, with the three of us in it we pay £15 each. It may not be as good as the top one, but it's not a bad orchid. Right, I'll see you in about an hour . . ."

"Hello, Frank. Yes, a terrible day. I used to think it rained every day over in Melbourne, but all the time I was there it was beautiful and now I come home to this."

"Did you see their Show, Charlie?"

"Well, I didn't have as much time there as I would have liked. I missed a few of the chaps we know; but they say Old Bill doesn't show any more, and there are a lot of other chaps like Pete and Norm and the old regulars. I guess they aren't getting any younger, but it is not the same without them. Most of their exhibitors would leave us for dead in individual exhibits. Some of them put in nearly as much as one of our district exhibits, and when you reckon out that it is almost all from the one glasshouse we ought to hang our heads in shame. But the show as a show seems to be dying on its feet."

"I can't have their show is better than ours, Charlie. I've seen it a few times, and I always think it's wrong to compare them. Lou will tell you the same thing, too. Where they come in as individuals they can't produce all the good flowers from the one glasshouse. The best I ever saw was two first prizes on the one stand for Cymbids. But that took nothing away from it as an exhibit. Looking at it from another angle, Charlie, how many of us could put a stand 12 feet by five feet, with thirty-odd Cymbids, a few Slippers, a Cattleya or two, a few other genera and all the Ferns and things as well. Over the year, just like you, I have a bug for counting the number of genera in the shows. Well, this year in Sydney, they had 18 in the whole show . . . no, I counted them over and over, Charlie, it was 18. You missed one somewhere. Well, when you consider the number of orchids that flower in September that's not many for a group of growers the size of the Sydney crowd."

"That's all very well, Frank, but the trouble is to get them all in here. Some of the growers have the idea that because the flowers are small

and no one looks at them much they aren't worth exhibiting. One of the exhibitors in Melbourne had 10 different types of orchids in his group and I don't suppose it made an impression on anyone at all. It certainly didn't get any recognition because of that silly concentration of prize cards. That's all that seems to matter with some of them. They can't get the tickets on soon enough. I don't like to think it, but their only interest seems to be the prize card and what goes with it. It takes a lot of effort to get 10 genera in flower and into a show, even if one or two of the plants are small. Still, times are changing, Frank."

"You're right about times changing. But it is the show that holds the whole thing together, Charlie. It's the annual event, almost the central feature of orchid-growing. Some people may not agree, but that's my idea and the idea of quite a lot of other growers. May be hard to say what's holding us together, but at least the commercial growers here and in Victoria should see that it's part of their business to keep the show going. They may show a loss on the show as a venture, but it's the contacts they make and the people they meet, Charlie. And that goes for most of the smaller exhibitors, too."

"Well, Frank, the first show I went to in Melbourne they couldn't have crammed another plant or another exhibit in the hall. It was downstairs somewhere, yes, the Town Hall, I think. There was hardly room to walk about. But its got to the stage now where they wouldn't be able to fill it, and even though I like the place where they show now, if you don't go on the first or second days the flowers are half-dead. Not that ours are much better. But even in Preston Motors they didn't have room to swing a cat at first. It's funny when you come to think of it—they had to ration the space out early on. All one side was bare this year—there was plenty of open space, but it was still a good show from the point of view of an outsider looking at flowers . . . It's stopped raining, we'll go out and have a look at things. I tried out that sawdust prescription, but I reckon they got their 'dusts' mixed up a bit . . . mind the step."

"Well, well, Charlie with Cymbids in beds. I didn't think you'd get on to it so fast. A bit early to tell what they are up to, I suppose."

"You'd be surprised, Frank. I had a scratch round under the surface the other day, and there are roots everywhere. Putting the fertiliser in the material gets longer roots than forced feeding like they use out at Dee Why. That's a drawback if they are to be shifted, but this lot will stay here for at least two years. The first lot are in ordinary slats rubbish, the other in sawdust. I've an open mind still about both."

"What do you really think about the sawdust, Charlie? I can go back a long way in orchids, and we've both seen sawdust before."

"That's right. Remember Les used it years ago. Put plenty of bits and pieces of fertiliser in it, too. Mind you, Frank, he grew his stuff better when he had less to look after, but he never grew them better than other growers grew them in their particular junk. And I think the same applies to the present sawdust mixture, except that the ingredients outlined in the last Review are far more explosive. If things didn't go just right with it . . . well, you'd need a big hole to put a lot of plants in. What do you think?"

"W-e-e-ell, I heard about the chap who bought one bulb and in a year he got six growths and two spikes from it. Another one got a back-bulb and turned it into a four-bulb plant with three spikes in two years. Those were two among the several instances quoted. But no one ever seemed to see those wonderful plants apart from the bloke who told the story. Of course, you've got to remember that some Cymbids will grow that fast, but apart from Enid, did you ever see one that was worth yard-room? I always reckon the test is to bring it along and put it on the bench alongside the other plants. And then there is always the joker who unconsciously stretches it a bit when he passes the story on to the next one, and so a two-bulb plant finishes up as a specimen in no time at all. The thing that sticks in my mind is that we have been growing Cymbids for a long while, many growers have been playing about with composts in an endeavour to make the plants grow faster, and so far none of them succeeded without paying the bill. I can't see that this one will be any better. No two plants grow the same anyway, Charlie; and who wants to grow them fast any more."

"I'll stick to tan-bark, Frank, except for this bed. So far they are all right, but at the first sign of trouble out they go."

"Have a cigarette, Charlie?"

"No thanks, Frank. You might reckon I'm a crank, but I don't smoke any more while I'm

handling plants, particularly divisions, like your bit here. And, where possible, I ask people not to throw their butts under the bench or on the plants in the beds."

"What's the idea?"

"I got rid of all the flecky plants, Frank, and I had a few; I want to see what the new idea does. They reckon tobacco virus can infect a lot of other things besides tobacco, and we still know nothing about it, despite what a lot of experts and others have written about it. If I get flecky plants from now on I want a reasonable explanation for it. We don't need to worry much these days about plant value, but I always found that a flecky plant had off-coloured flowers in some years. I need all clean, good flowers from now on."

"Gee, is that my piece? I thought the plant would break up better than that. Not much root on it, is there?"

"Ted drew the numbers out, and he got the worst piece of the three, I got the best, but if you aren't happy you can have it, Frank. I still think it was worth £45 and in a couple of years we should have a good plant each, and even if it's only good for its flowers I wouldn't mind having four or five plants of it."

"No, Charlie, that bit will do me. I'll soon make it grow. See you at the meeting Monday night. Thanks for looking after Etta for me. See you later."

• *A CHEQUE FOR £11,700*:—Before one of the largest meetings of the Parramatta and District Orchid Society the President, Mr. A. J. Webb, handed to the President of the Northcott School for Crippled Children, Mr. K. Brown, a cheque for £11,718, proceeds of the orchid festival in Parramatta. The gross receipts were £11,900 and the expenses £270, leaving more than £11,600 net, which had been swollen by some miscellaneous receipts.

Mr. Webb said it had been an epochal year for the society. The show had produced some of the best flowers in the State and the festival had done something worthwhile for the city.

The Mayor of Parramatta (Ald. E. A. Mobbs) said it had long been his ambition to have a festival in Parramatta and the initiative of the Orchid Society had created the opportunity. To raise almost £12,000 and keep expenses down to £270 was a triumph of organisation which every business man would admire. He had recommended to the city council that a festival should be held annually and the Council had approved.

Shows and Things

J. N. RENTOUL

• It is quite obvious when we look at the prize winners at the shows these days that a great amount of preparation is put into both plants and flowers. Planning ahead a year or two seems to be very necessary to get into the front rank. Production must be both controlled and timed to have the best flowers available on the due date. Perhaps we could say that possession of at least three plants of our best varieties of Cymbidiums, Catleyas and Cypripediums is a first necessity. Seasons may vary a little, but with the three plants timing can be arranged so much better if we can get the three to flower in one year.

The clever grower does not stop at the three plants. He works over them ceaselessly after the flower spikes and buds appear. He spaces them out on the stem, washes behind their ears and keeps the pests at bay with every means at his disposal. Though it could at a stretch be classed as manipulation, he stakes the spikes correctly and gently twists the individual buds until they are facing the right way. Or he cunningly contrives small strips of slotted celluloid to hold them when they are stubborn. Even the old argument of environment versus heredity and training is only too well exemplified when one grower gives up in disgust because the variety just does not fit into his cultural limitations.

Even after years of innovation and experiment we are still at the mercy of the weather. Our whites always seem best when the buds are burnt to a cream colour before they open. Maturing in the shade after the buds commence to burst, they assume a white innocence that never suggests a suntan. With artificial light we cannot hope to get a pink in Girraheen Enid, a perfect white in Dorchester Jeanette or purity in Balkis — still our best three Cymbidiums until a better one beats them one by one on the show tables.

But that is merely a preliminary to the show and the preliminary to other shows almost eighty or more years ago. Perhaps if we have a glance at a schedule for one of these shows held in England over eighty years ago it may nullify some of the smugness we are apt to show now and then. And when we read of an orchid conference sponsored as though it was an initial venture in this field, it is as well to remember the conferences associated with

these shows so long ago, attended and contributed to by such eminent men as Professor Reichenbach and H. J. Veitch.

The classes to us may seem strange, because they had so few Cymbidiums and Cypripediums. I wonder, after looking over a few shows this year and other years, where we would be without Cymbidiums?

Classes for Cattleyas and Laelias were liberally exhibited; Odontoglossums were shown sometimes in hundreds. Masdevallias, colourful and strange, contributed colour rich beyond imagination; Cypripediums, perhaps species only, balanced out a bit in the dull tonings they possess. But there were groups for Oncidiums, including the ones we still grow and appreciate so much, e.g., *O. varicosum*. Dendrobiums were grown in hundreds, both species and early hybrids. And where a hybrid orchid was exhibited it was asked that where possible the parents should be included with it in the group. Imagine us to-day trying to qualify in this way. Most of us would not know where to start looking for the parents of *one* of the orchids we grow, and too many of us do not even care where they originated.

But there was included one class that poses an intriguing problem—a class for “orchids in fruit”. Taking it colloquially, we could say that apart from *Vanilla planifolia* we could not nominate any other that supplies anything edible; but then fruit literally means “a matured seed vessel and its contents” so that display of “orchids in fruit” could be highly interesting. Perhaps we may go back fifty years to find a novel idea, and have a competition for the best collection of “orchids in fruit” in a future Spring Show.

A scientific friend advises me that to-day the *Vanilla* we taste is mainly a result of synthetic organic chemistry. It is produced from Eugenol, the principal ingredient of oil of cloves, or from Lignin, a waste product in soft wood paper manufacturing; so that even this one time addition savoury can no longer be regarded as a purely fruit product. However, to get back to our orchid show.

Pride in their country and their flowers led to the inclusion of classe for indigenous orchids of Great Britain alongside hardy orchids from other countries.

Materials used in potting orchids, such as sphagnum moss, peat, fibre and baskets, rafts and other containers were exhibited. Our containers and materials have altered very little to this day, and where we have a well-grown plant, we may rest assured that it is no better than those produced so long ago.

There is no doubt we have progressed to-day in some ways and we can but hope that H. J. Veitch and all those other worthy men who put down the foundations for us can appreciate what we are doing in other fields, when they have a few moments to spare from

that magnificent glasshouse where they must labour now. It would be nice to think that they do.

But when we get rather blase and rather careless in our handling of our plants, it should be chastening to us to remember that we are not innovators, we are merely following rather haltingly in the footsteps of great men, and it is up to us to remember a little more than the pounds, shillings and pence side of the business and seek to be remembered for what we did rather than what we made out of it.

Victorian Orchid Club Spring Show

• *VICTORIAN ORCHID CLUB SPRING SHOW*:—Spring festival of the Club was held again in Preston Motors Showroom, by courtesy of that firm, and the proceeds assisting Red Cross. Fewer exhibitors this year left a little more room to move about and served to emphasise our crowded shows of other years. It was a comfortable show and, if not quite as successful as other years, there is little doubt of the more extensive interest in orchids as each year goes by.

Dorchester 'Jeanette' won the Sydney-Melbourne double this year, and it should be interesting to see whether some of the newer Cymbidiums can topple Dorchester. It will not be easy, despite the confidence expressed by some growers. The decision will be on the show bench, not via Kodachromes or stretches of imagination.

Mr. Davis, owner of the Melbourne winner, had won numerous prizes at the show, as a glance through the prize list would indicate. His spike of eight flowers, not quite crystalline or fresh as should be, was fairly even in quality from top to bottom, standard $3\frac{1}{2}$ inches of this superb orchid.

Runner-up, Ispahan 'Mascot', exhibited by ex-president Mr. G. Floyd, was a very clear pastel green, of quite good form. Third, Girraheen 'Enid', was not quite out when judged, but improved as the show went on. It was not a large flower, but had the true Enid colour and shape. As in the N.S.W. Festival, three orchids stand out as our best and will remain on the top line for many years—Dorchester, Girraheen 'Enid' and Balkis.

It was noticeable in Melbourne this year that the quality of the flowers was poor gener-

ally in Cymbidiums but good in other genera. It was unusual to see many Cattleyas in our shows some years ago, but with less demand for them these days they were liberally laid on in many exhibits. Bow Bells, pure white, is hard to beat at any time, but Dr. Harvey's was excellently flowered.

There were some notable Dendrobiums, but George Leverett and Co.'s D. Model could scarcely be outpointed in any company. It was followed very closely by others with D. Sunburst and D. Cybele. Two really magnificent D. nobiles were shown by Mr. Garton and Mr. Schultz. That of Mr. Garton had short crowded stems of thickly flowered beauty, where Mr. Schultz's had very long growths flowering generally on the lower half of the stem. They were the best seen for many years at our shows.

Cypripedium Angel Luscombe, though not one out of the top drawer, is nevertheless good enough to win many shows in future years. It is one of our very attractive and well-balanced Cypripediums and had little trouble in defeating Falstaff, another of the borderline good ones. There were fewer "Slippers" this year, but it is not so much that they are slipping as the fact that one of the largest collections is being dispersed and we really missed that mass from Messrs. Jones.

The show must be acknowledged as poorer than in other years. It was also noticeable in the N.S.W. Festival. In this regard it should be realised that we used to aim very high in our Spring Festivals and we are gradually sintering down to a steady average event, much to be desired over the lavish productions where the true beauty of the flowers was often

lost in the desire to create a spectacle. Foliage plants of many types are creeping into exhibits and they add that softer touch to the harsh leaves of the main flower, the Cymbidium.

Some say that we will have to change our standards in these Cymbidiums, but growers who were individuals rather than slaves to the prevailing fashion of the cupped flower won't have to change anything at all. The lovely Cymbidiums, open, clean and attractive, we have had with us all along the way are simply assuming the position they should have occupied all along. For commercial reasons? Not at all! They have always been worth their place and all our other orchids are showing little change other than better culture. That was borne out more vividly at this year's show than at any other we have seen.

Results of Spring Show—Sept., 1959

Cymbidium, Champion: 1st, Dorchester 'Janette', Mr. C. Davis; 2nd, Ispahan 'Mascot', Mr. G. Floyd; 3rd, Girrahween 'Enid', Mr. F. Rooney. Cymbidium, Decorative: 1st, Cygnus 'Janette', Mr. H. Nelson; 2nd, Glenbrook 'Greenacres', Mr. J. Allan; 3rd, Nubian 'Eloura', Mr. R. Martin. Cymbidium, Green Shade: 1st, Glenbrook 'Greenacres', Mr. J. Allan; 2nd, Concha, Mr. G. Leverett; 3rd, Riki, Mr. H. C. Nelson. Cymbidium, Yellow Shade: 1st, Cariga, Mr. R. Hodgins; 2nd, Swallow 'Daffodil', Mr. H. C. Nelson; 3rd, Swallow 'Daffodil', Mr. J. Read. Cymbidium, Red Shade: 1st, Cyzara 'Merrilong', Mr. J. Allan; 2nd, Mayfair 'Stonehurst', Mr. H. Schultz; 3rd, Priam 'Ada Meech', Mrs. Cole. Cymbidium, Pink Shade: 1st, Ceres 'Girrahween', Mr. C. Davis; 2nd, Carisbrook 'True Rose', Mr. J. Garton; 3rd, Charm x Fairy Princess, G. Leverett & Co. Cymbidium, White Shade: 1st, Bodmin Moor 'Gwenda', Mr. G. McCraith; 2nd, A.W.B. x Alex 'Album', Mr. J. Garton; 3rd, A.W.B. x Alex 'Album', Mr. H. Nelson. Cymbidium, Specimen: 1st, Golden Glory, Mr. M. Greenwood; 2nd, Cassandra No. 1, Mr. M. Greenwood; 3rd, Miranda 'Maisie', Mr. H. C. Nelson.

Cattleya: 1st, C. Bow Bells 'Penn', Dr. R. Harvey; 2nd, Bc. Yvonne Patterson, Dr. R. Harvey; 3rd, Catt. Bob Betts, Mr. F. Keenan.

Dendrobium, Hybrid: 1st, Den. Model, G. Leverett & Co.; 2nd, Den. Sunburst, Mr. J. Allan; 3rd, Cybele, Mr. J. Allan. Dendrobium, Species: 1st, Den. nobile, Mr. J. Garton; 2nd, Den. nobile, Mr. H. Schultz; 3rd, Den. nobile, Mr. N. O'Sullivan.

Odontoglossum: 1st, Royal Serenade, Mr.

J. Garton; 2nd, O. Crispum, Kirksley Orchids; 3rd, Oda. Inferna, Kirksley Orchids.

Miscellaneous: 1st, Lycaste Skinneri, Capt. & Mrs. Cole; 2nd, Vanda Rothschildiana, Mr. C. Davis; 3rd, Vanda Honolulu, Mr. Schultze.

Coelogyne, Specimen: 1st, Cristata, Mr. G. E. Floyd; 2nd, Cristata, Mr. V. Smith; 3rd, Cristata; Mr. V. Smith.

Specimen, other than Cymbidium or Coelogyne: 1st, Den. nobile, Mr. J. Garton; 2nd, Zygopetalum Grinitum, Mrs. Tweedie; 3rd, Lycaste Skinneri, Capt. & Mrs. Cole.

Cypripedium, Best in Exhibit: 1st, Angel Luscombe 'Rosemont', Mr. C. Davis; 2nd, Falstaff, Mr. C. Davis; 3rd, No. 1, Mr. G. McCraith.

Cypripedium, Red Shade: 1st, Wendover x Wendover, Mr. H. Nelson; 2nd, Greyhound, Jones Bros.; 3rd, Greyhound, Jones Bros.

Australian Native: 1st, Den. superbien, Mr. H. Schultze; 2nd, Den. Kingianum, Mr. N. O'Sullivan; 3rd, Cymbidium Canaliculatum var. Sparkesii, Mr. H. Schultz.

Cymbidium, Novice: Miranda var. Golden Crown, Mr. J. Mathieson.

Cymbidium exhibited at a V.O.C. Show for the first time: Morning Glory, Hodgins Orchids.

Cymbidium, spike with at least 12 open flowers: Glenbrook var. Greenacres, Mr. J. Allan.

Cypripedium, with at least two flowers: Matchless, Mr. C. Davis.

Dendrobium, Specimen not judged on form: Den. nobile, Mr. J. Garton.

Display of Cypripediums: Mr. C. Davis.

• *ST. GEORGE ORCHID SOCIETY*:—The Eighth Annual Orchid Exhibition with proceeds going to Legacy was held at Legacy House, Hurstville, and was very successful both from the location and financial aspects. Hard work and harmony made this possible.

New members won prizes, an encouragement to even newer members. The Champion Cymbidium was Dorchester 'Jeanette' exhibited by Mr. A. Birdsall, who also won the A. W. Buckley Trophy for the best orchid other than a Cymbidium. The Silver Medal of the O.S.N.S.W. was won by Mr. E. Moffatt for the best display of orchids and foliage plants.

Mr. H. Crutch showed the best Dendrobium, the best Phalaenopsis and the best Vandaceous orchid. The Reserve Champion Cymbidium and the best seedling Cymbidium were shown by Mr. B. Schwartz.

• **QUEENSLAND ORCHID SOCIETY'S ANNUAL SHOW:**—Despite heavy showers on two of the three nights, between 4,000 and 5,000 people attended the Silver Jubilee Show of the Queensland Orchid Society.

The Society's Twenty-fifth Anniversary coincided with the State's Centenary celebrations and the Society made a special effort to see that the show was in keeping with the year.

Not only were there the usual displays of orchids and exotic plants, but there were also special stagings of educational displays of Queensland's own *Dendrobium phalaenopsis*, and of paintings of Queensland orchids by well-known artist, Kathleen McArthur, of Caloundra.

Recently, the Cooktown orchid, *Dendrobium phalaenopsis*, was chosen as Queensland's floral emblem so the educational display in the Brisbane City Hall in September was specially designed to show people how to grow and care for this world-famous orchid.

Two visitors from the United States commented with amazement at the variety of orchid blooms on display, saying that it was unusual to see such a wide range of varieties grown with such apparent success in one area. Orchids featured in the display included Cattleyas, Laelias and their hybrids, Vandas, *Dendrobiums*, *Phalaenopsis*, *Cypripediums*, *Phaius*, *Saccolabium*, *Cymbidiums*, a number of inter-generic crosses and numerous native orchids.

The Show was officially opened by the Society's Patron, Sir John Chandler.

Prize winners in the competitive sections were:

Cattleya: First, A. W. F. Kurth, L.C. Christine Kodama; second, J. Bearup, B.C. Cliftonville.

Phalaenopsis: First, E. A. Knoblauch, *Philomemteni* x *Doris*; second, E. A. Knoblauch, *Jane L. Kingsbury* x *Atala*.

Dendrobium: First, C. W. Valle, *Dendrobium nobile*; second, T. C. Harveyson, *Dendrobium Merlin*.

Cymbidium: First, Mrs. C. Hayes, *Cym. Swallow* 'Golden Glory'.

Cypripedium: First, A. W. F. Kurth, *Gold Mohur* x *Mino*.

Native Orchid: First, P. K. Searle, *Dendrobium Johannis*; second, E. Merritt, *Phaius Tankervilleae*.

Vanda: First, P. G. Cran, *Vanda Liliha* x *Sanderiana*; second, A. W. F. Kurth, *Vanda Sanderiana* x *Rose Davis*.

Novice Class: First, R. Ogilvie, *Cymbidium Swallow* 'Hebe'; second, F. Logan, *Cymbidium Perfection*.

Composite Exhibit: First, E. A. Knoblauch.

Champion Orchid: Specimen, P. K. Searle, *Dendrobium Johannis*.

• **WESTERN AUSTRALIAN ORCHID SOCIETY — SPRING ORCHID FESTIVAL, 1959:**—The Spring Orchid Festival, 1959, of the Orchid Society of Western Australia was held in the Perth Town Hall on October 1 and 2. In the opinion of members and keen horticulturists the Orchid Society staged its finest exhibition to date. Indeed, many were of the opinion that it was the most outstanding flower show ever held in the Perth Town Hall.

The exhibits were ahead of the previous best both in number and quality and indicative of the growing strength of the orchid movement in this State. The orchid most admired was the beautiful pink *Phalaenopsis Schillierana* x *Fontainebleu* with 69 blooms exhibited by Mr. H. Mercer.

An added attraction this year was the fine display of *Arandas*, *Vandas*, etc., sent us by the Malayan Orchid Society.

The Champion *Cymbidium* was exhibited by Mr. J. Brasington. An upset occurred in the Cattleya Championship, the winner coming from the Novice Section.

The prize list was as follows:—

Champion *Cymbidium* of Festival—Cassandra 'Warringal' grown by J. S. Brasington.

Reserve Champion *Cymbidium*—Miranda 'Maisie' grown by A. C. Dawson.

Best *Cymbidium* Novice Section—Princess Elizabeth 'Adamsons' grown by R. D. Brown.

Champion Cattleya of Festival—Bobby Jewel x Snow Song grown by R. D. Brown.

Reserve Champion Cattleya—Ann Sander x Roger Sander grown by G. B. Cantwell.

Best White *Cymbidium*—Cassandra 'Warringal' grown by J. Brasington.

Best Yellow *Cymbidium*—Miranda 'Maisie' Roseum grown by A. C. Dawson.

Best Pink or Red *Cymbidium*—Princess Elizabeth 'Allambi' grown by F. Birk.

Best *Cymbidium* any other colour—Vesta grown by J. Brasington.

Best specimen plant *Cymbidium*—Vesta x Roseum grown by A. C. Dawson.

Best Cattleya—Ann Sander x Roger Sander grown by G. B. Cantwell.

Best *Cypripedium*—'Gwen Hannon' grown by G. B. Cantwell.

Best display orchids and pot plants—F. Birk.

NOVICE SECTION

Best White *Cymbidium*—Princess Elizabeth 'Adamsons' grown by R. D. Brown.

Best Yellow *Cymbidium*—Swallow 'Pure Gold' grown by Mrs. Wilkins.

Best Green *Cymbidium*—Madonna grown by E. Young.

Best Pink or Red *Cymbidium*—Girrahween 'Enid' grown by B. J. Hayes.

Best *Cymbidium* any other colour—*Dracula* grown by F. Power.

Best *Cattleya*—Bobby Jewell x Snow Song grown by R. D. Brown.

Best *Cypripedium*—*Olympus* 'The Chairman' grown by Miss Whittaker.

Best Australian native *Dendrobium*—*Kingianum* grown by E. Young.

Best any other genus—*Lycaste lasioglossa* grown by H. Lodge 2; *Lycaste Skinneri* grown by R. D. Brown 2.

• **TASMANIAN ORCHID SOCIETY'S SHOW—HOBART TOWN HALL, OCTOBER 14-15, 1959:**—The Society staged its Sixteenth Annual Show at the Hobart Town Hall; it was a great success and well attended by the public.

The Show was opened by Mrs. G. F. Davis, who was introduced by the President, F. W. Chilvers. In spite of the Committee's anxiety by late blooming of *Cymbidiums*, very fine exhibits were staged by individual members with ten fine displays, also a large group by collective members. A table by non-members and a very fine exhibit of artistic merit in a new class artistic arrangement to those members who grow only a few orchids.

Considering that the Society lost three prominent exhibitors this year, all were well pleased with the result achieved. A brief summary of exhibits were as follows:

Miss Sayeason, Vice-President of the Society, staged a very artistic group 12ft. x 6ft. A magnificent specimen of *D. speciosum* and pride of place *Cym. Cызara* awarded prize for the best pink. *Cypripedium* hybrids were prominent with *Cypripedium Desdemona* and *Leeanum* crosses. Choice house plants set off a very fine exhibit.

Mr. E. Vince, Vice-President, staged a group of educational value with a miniature glass house of polythene fabric containing orchids,

various potting mixtures were displayed and containers. Mr. Vince also demonstrated repotting of orchids each evening to interested groups of people who attended the show.

The Botanical Gardens staged a large exhibit of various glasshouse plants covering the centre of the stage. *Cymbidium* hybrids had pride of place. *Cattleya* hybrids of intermedia varieties were also prominent.

Non-members staged a most colourful exhibit of *Cym. Pauwelsii* and *Cym. Doris* and a beautiful large white hybrid. A magnificent specimen of *Cym. Edzell* 'Fire King' had a prominent place in the exhibit. The plant was grown by Mr. Angel.

Mrs. D. Winton staged a fine exhibit in a new class of "Artistic Merit" which was beautifully arranged and two plants of the pure white *Cymbidium* Margaret were shown to advantage in the exhibit. A floral vase was artistically arranged as a centre piece.

Mr. James staged a large 12ft. x 6ft. exhibit of tropical plants which were beautifully grown. Prominent in the group were *Cymbidium* *Dorchester*, *Cym. Swallow* *Koree* and *Cyp. Polly*, *Philodendron sellowiana*, *Ficus decora*, *Dracaena*, *Anthurium Scherzerianum*, *A. Andreanum*, *Monstera*s and *Hoyas* were prominent.—J. Chilvers.

• **MANNING RIVER ORCHID SOCIETY:**—The June meeting was held in the banking chambers of the Commonwealth Bank, Taree, which was bedecked with *Cypripediums*, *Cymbidiums* and indoor plants. Mr. J. Bury welcomed Mr. John Bisset, of Sydney, who gave a very interesting talk on orchids and answered questions put to him by members. This visit was very much appreciated. The Society would like more visits by growers of such calibre.

The Society also had a visit from Mr. Bond, of Marmong Point, Newcastle, who showed coloured slides of orchids and gave a talk on them at the July meeting. This address aroused a great deal of interest. Mr. Bond was appointed a judge for the forthcoming orchid show at Taree on September 23.

Membership is steadily increasing and meetings are very well attended.—T. R. B. Boyce.

• **FRONT COVER:** *Cymbidium* x *Dorchester* var. 'Jeanette', Grand Champion O.S. of N.S.W. Festival, September, 1959.

Notes From Affiliated Societies

WARRINGAH ORCHID SOCIETY:—

Sir John Hall Best, the President of the Orchid Society of New South Wales, opened the Seventh Annual Exhibition of the Warringah Orchid Society, which was held in the spacious Mosman Town Hall on Thursday and Friday, the 27th and 28th August, 1959. Though rainy conditions adversely affected attendances at the Show, the quality of the flowers in all sections showed improvement. The prize winners included the following:—

Champion Cymbidium.—Balkis Luath, Mr. O. W. Miels.

Reserve Champion.—Balkis Luath, Mr. N. S. Wyborn.

Best Specimen Cymbidium.—Mallow Murray, Mr. N. S. Wyborn.

Best Coloured Cymbidium.—Yellien Neilley, Mr. W. Eyre, 1st; Southborough Nirvana, Mr. S. Strahan, 2nd.

Best Display of Orchids.—Mr. R. E. Trenerry.

Best Miscellaneous Group of Three Genera.—Mrs. F. G. Spurway (Den. Gatton Monarch, Phalaenopsis Reve Rose, Coelogyne Cristata).

The W. W. Kavanagh Trophy.—Lady Members, Mrs. E. V. Smith.

The Medal of the Orchid Society of N.S.W. presented to the Society for award to a member exhibiting at the Annual Show was won by Mrs. E. Bingham.

• EASTWOOD & DISTRICT ORCHID

CIRCLE:—The annual show at Eastwood made special features of the display of Bridal Bouquets and the exhibits of orchids and foliage plants in both Open and Members' Sections. The Open display carried the Silver Trophy of the American Orchid Society and was won by Mr. J. McKinney with Mr. H. Burley a very commendable second. Both these growers used a number of genera of fine miscellaneous orchids in addition to Cymbidiums in setting up their exhibits.

In the Members' Section, groups of growers are allowed to collaborate in staging exhibits, which policy resulted in six very fine displays being presented.

The Champion Cymbidium was a most attractive white Balkis, not previously shown, grown by Captain Anderson.

• **THE IPSWICH ORCHID SOCIETY'S FIRST ORCHID SHOW:—**After only seven months in existence, the Ipswich Orchid Society held its first Orchid Show.

Whilst the bulk of the exhibits were grown by local members, the Society was indebted to the Queensland Orchid Society and Gold Coast Orchid Societies for contributions to its display.

An eye-catching and breathtaking exhibit and one which will not easily be forgotten by those who saw it was a magnificent specimen of *Phalaenopsis Schilleriana* with over 260 blooms. Grown by Mr. Joe Shaw, Secretary of the Gold Coast Orchid Society, who is also a member of the Ipswich Orchid Society. Some fine Cymbidiums were shown grown by local members. Vandas, including a fine *Vanda Rothschildiana*, were greatly admired. A display of numerous *Epidendrum* hybrids, white *Phalaenopsis Margaret Bean* and *Swandean* were outstanding. *Den. Sanders* *Crimson* and *Den. Louise Bleriot* x *Mde. Pompadour* in rich dark shades represented the best in *Dendrobiums*. Even a *Cooktown* orchid was to be seen. *Cypripediums*, both species and hybrids, were well to the fore. *Cattleyas* in all shades added their regal colours to top off a fine display. Everyone was pleased and happy; all are eagerly looking forward to a Show next year.

• THE NORTH SHORE ORCHID

SOCIETY:—The annual Spring Show of the North Shore Orchid Society, which was held on Thursday, Friday and Saturday, 10th, 11th and 12th October, 1959, was a very successful function.

The orchid fraternity has developed the custom of coming to the North Shore Show to see a display of the best orchids available and on this occasion was not disappointed.

The Champion Cymbidium was Mr. J. Arnold's *Dorchester* 'Jeanette' and the Reserve Champion Mr. S. G. Cooke's Balkis 'Luath'.

In the class for three Cymbidiums two very good groups carried off the prizes: Mr. S. G. Cooke's *Princess Astrid* 'Dorothy', *Swallow* 'Soulangeana' and Balkis 'Luath' being first, and Mr. N. Wybourn's Balkis 'Luath', *Louis Sander* 'Kirribilli' and *Prinkest Astrid* 'Dorothy' second.

Mr. L. Sasso had the best *Cattleya*, a lovely white *Bob Betts*, and Mr. R. Trennery's *Langley's Pride* 'Laelia Sasso' was the best *Cypripedium*.

• **THE ORCHID CLUB OF SOUTH AUSTRALIA:**—The October meeting of our club was on the 1st and was well attended with Vice-President Mr. F. C. Wood in the chair.

Mr. Ray Wayne demonstrated his method of repotting a cymbidium and both new and old members were interested in his compost feeding programme and a sound idea for drainage. Mr. Wayne used on large concave crock, then placed a good thick bun of osmunda fibre over it.

The popular vote competition favoured the following blooms:—*Cymbidium* Bodmin Moor 'Gwenda', *Dendrobium* 'Grace', *Miltonia* Elendara 'Raphael' x *Piccadilly* and *Phalaenopsis* Mistinguette.

• **CAMDEN ORCHID SOCIETY:**—One hundred pots of orchids, including *Cymbidiums*, *Dendrobiums*, *Cattleyas*, *Cypripediums*, *Vandas* and Native Orchids, provided an exotic display at the third annual show of the Camden Orchid Society held in the R.S.L. hall.

The President, Mr. R. Petrie, when interviewed at the conclusion of the Show, said that entries were a little less in numbers than last year, but nevertheless the quality was there.

Catching all eyes as one entered the door was the stage setting arranged by members of the Society. A modern dining room setting had been arranged, and orchids were used to advantage in the decorative scheme. A blonde suite of table and four chairs and glass fronted buffet sideboard stood on a carpet square which covered the floor.

The backdrop to represent the wall of the room was pale blue and into this was cunningly set a box window. In this was tastefully arranged a table lamp, an attractive ornament and stems of different orchids in a large deep red and gold oriental vase. Orchids were again used in a low bowl and needle holder on the table and buffet, and large pots of orchids in modernistic wrought iron stands along the front created a beautiful effect. A standard lamp placed at the end of the buffet completed the decor of the room.

Large weeping willow branches placed at intervals all round the walls and across the ceilings brought the cool green of the outdoors to the hall. One corner was like a beautiful bush glade, with potted ferns, staghorns, fern baskets, pots of orchids, *Cyclamen* and moss converging together in a manner which none could help but admire.

• **THE COFFS HARBOUR ORCHID SHOW:**—The Coffs Harbour Horticultural Society held its annual exhibition at Coffs Harbour on September 10th and 11th, 1959.

The display of Orchids was of a very high standard. It says much for the enthusiasm of the exhibitors that many plants were brought from Port Macquarie, 110 miles away, and Kempsey and Macksville, 77 and 34 miles respectively, through tropical rain. The weather was most unkind, as for days prior to and during the show the rain was incessant and heavy. The weather cleared on the evening of the last day which resulted in a good attendance.

Among the principal orchid awards were:

Champion *Cymbidium* of the North Coast.—Balkis Luath, Mr. C. Hawes, Kempsey — a well grown plant with three excellent sprays.

Best Specimen *Cymbidium*—Cassandra Jennifer, Mr. J. Estens, Port Macquarie—a really magnificent plant in a 10-inch pot with 10 sprays.

Best *Cymbidium*.—Balkis Allambie, G. Hughes, Macksville.

Best Yellow *Cymbidium*.—Sunshine var. Yellow Gem, Mr. C. Hawes, Kempsey.

Best Pink *Cymbidium*.—Edzell Elizabeth, Mrs. Hamey, Coffs Harbour.

Best Dark *Cymbidium*.—Carisbrook Florance, Mr. C. Hawes, Kempsey.

Best two decorative *Cymbidiums*—Goosander Sailor Bay and Galaxy Bullfinch, Mr. J. Estens, Port Macquarie.

The display of orchids other than *Cymbidiums* was disappointing due to the long continued cold and wet weather which retarded development. The only outstanding exhibit was *Den. Gattton* Monarch var. *Christane* Read, exhibited by Mr. H. J. Cann, Coffs Harbour.

• **HAPPY CHRISTMAS:**—*The Australian Orchid Review* wishes its readers and correspondents a Happy Christmas; with much pleasure and success with their plants for 1960.

The honorary editors are looking for Christmas presents—in the form of articles or notes!

You would help and encourage us with information on any aspect of orchid collecting you find interesting. How about a contribution for "Conversation Pieces"? Some notes on plants and their cultivation in your district? New trends? . . . If you feel you want any editorial help, let us have your thoughts, we will prepare the script.

A Happy Christmas to all—don't forget we want those articles for 1960.

Miscellaneous Orchids

To have flowers all through the year you must grow
miscellaneous orchids.

The following showy types now available:

LAELIAS

Autumnalis, Anceps, Cinnabarina, Jongheana, Pumila, Praestans.

ONCIDIUMS

Forbesii, Gardnerii, Varicosum Rogersii, Nona, Jonesianum.

ODONTOGLOSSUMS

Citrosimum, Schlieperianum, Rossii, Nebulosum.

EPIDENDRUMS

Stanfordianum, Dichromum.

SOPHRONITIS GRANDIFLORA

Plastic Pots in sizes 4", 5", 7", 9" for sale



Orchid Company
(AUST.) PTY. LTD.

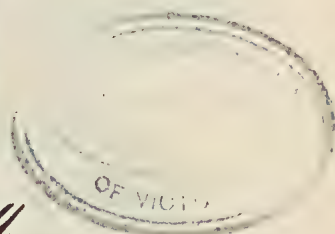
Phone 98-6321
for Orchid Compost.
We deliver.

P.O. BOX 28

DEE WHY

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.



Advertiser wishes to purchase copy of Australian Orchid Review Vol. 22, No. 2, June, 1957, also index to Volumes 20 to 23. Please contact Casa Crashley Limited, 58 Ouvidor, Caixa Postal 906, Rio de Janeiro, Brazil.

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
"Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums from India

D. Aggregatum, 30/-. Yellow.
D. Chrysotoxum, 30/-. Yellow.
D. Dalhousianum, 30/-. Cream and yellow.
D. Formosum, 30/-. White & yellow.
D. Nobile, 30/-. Purple.

D. Primulinum, 30/-. Pale to dark mauve.
D. Fimbriatum, var.: oculatum, 30/-. Yellow, maroon throat.
D. Farmerii, 30/-. Pale pink.

D. Moschatum, 30/-. Apricot.
D. Pierardii, 30/-. Pale mauve.
D. Hildebrandii, 30/-. White and yellow.
D. Densiflorum, 25/-. Yellow.
D. Densiflorum, 30/-. Yellow.

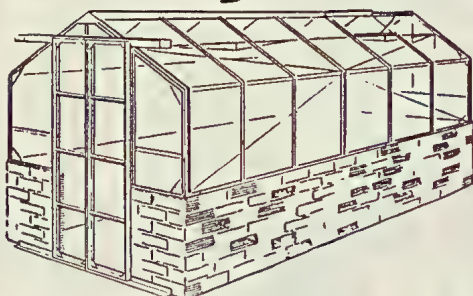
AIR FREIGHT EXTRA. ALL PLANTS 30/- FLOWERING SIZE

KIRKWOODS ORCHIDS, 349 SHERIDAN ST., CAIRNS NORTH, NTH. QLD.

SEND FOR GENERAL PRICE LIST OF OTHER ORCHIDS

ALUMINIUM ALLOY PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet
Price: £93. 12. 6.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2.

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE

*Wishes all Orchid friends, correspondents and
readers of Australian Orchid Review*

**A MERRY XMAS and the BEST of
GROWING RESULTS for 1960**

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

NEW TYPE DECAYED WOOD ORGANIC COMPOST

This compost is made in accordance with articles published in this journal, ready to use and requiring no further additions.

Limited quantities will be available early February, 1960.

PRICE 35/- per corn sack ex-nursery

ORDERS TAKEN NOW

R. S. DICKSON

18 BUENA VISTA AVE.

DENISTONE. WL3180

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.

MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

BOOKS FOR CHRISTMAS

A CULTURAL TABLE OF ORCHIDACEOUS PLANTS (J. Murray Cox). 13 col. plates, 67 other ills. 'Special Xmas offer. £8. 8. 0. reduced to £4. 4. 0. Post 3/6d.

EXOTICA (A. B. Graf). Over 4000 ills., some in colour, of indoor plants, orchids and exotics, new revised edition.

A "must" for all keen growers. £14. 19. 3. Post 5/-.

FLOWER ARRANGEMENT CALENDAR 1960 (Helen Van Pelt Wilson). Ills. 13/-, Post 1/-.

GOLD IN AUSTRALIA (edited late Charles Barrett). 1st edn. Ills. S. T. Gill and other gold-fields artists. Special price £1. 10. 0. reduced to £1. 0. 0. Post 1/6d.

YOU TOO CAN GROW ORCHIDS (R. Hancock & M. Smith). Col. and B/W plates. New edition. 17/6. Post 1/-.

LET NO MAN WRITE MY EPITAPH (Willard Motley). Sequel to "Knock on Any Door." £1. 2. 6. Post 1/6d.

THE ORCHIDS (edited C. W. Lithner). With 114 ills. Better Hybrids, larger seedlings, and improved growing conditions. £9. 11. 9.

THE RHODODENDRON (B. Urquhart). With 18 coloured reproductions from paintings of Carlos Riefel. £5. 10. 0. Post 4/-.

HOBART RIVER CRAFT SEALERS OF BASS STRAIT (Harry O'May) Map. Ills. 15/-, Post 1/6d.

THE ART OF THE FLORIST (Gladys M. Lankshear). Deals with the wiring and arrangement of flowers for wreaths, bouquets, etc. illus. 18/9d. Post 1/6d.

ORCHIDS (Matthias Riehl) 16 col. plates featuring Cattleyas, Cymbidiums, Dendrobiums, etc. £3. 2. 0. Post 2/-.

SPEAK YOU SO GENTLY (Kylie Tennant). Travel book of unusual fascination by one of Australia's famous novelists. £1. 2. 6. Post 1/6d.

CHASING RAINBOWS (George Patterson). For those who love fishing and the Australian outdoors. Col. plates. 18/6. Post 1/-.

THE CANON—Australian Journal of Music. Yearly subscription 30/-, An ideal gift for a friend.

We search the world successfully for Rare and Out-of-print Books.

Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.

We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.

10X British Aplanatic folding Magnifiers—of great use to Botanists, £3.11.6.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

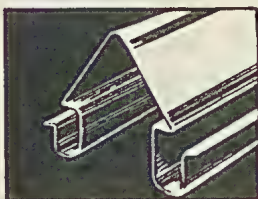
{ Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L. C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION



It's easier to roof your glasshouse when you use galvanised iron glazing bars and clips. The glass is held securely and neatly. There's no waste . . . glazing bars and clips are easily removable if needed for use elsewhere.

GLAZING BARS, 8 ft. Lengths	-	-	-	-	-	-	-	6/3 per length
GLAZING BAR CLIPS	-	-	-	-	-	-	-	4/3 per 100
16" x 14" x 21 oz. HORTICULTURAL GLASS								
64 Sheets to Case=100 sq. ft.	-	-	-	-	-	-	-	87/- per case

Loose Sheets—Price extra.

SWANS LIMITED

406-412 Elizabeth Street, Sydney—B0931
49 Aird Street, Parramatta — YL9961
135 Forest Rd., Hurstville — LU2066
67-69 Burelli St., Wollongong—B3301-8
932 Pacific Highway, Chatswood—JA3462

CYMBIDIUM ORCHID SEED FOR 1960

John Blowers (red) x Balkis, Lori.
 Ortin (Pink) x Babylon, Castle Hill.
 Pearl, Mag. FCC-RHS. x Etta Barlow.
 Susette, Per. AM-RHS. x Ann Green.
 John Blowers x Alex. West. FCC-RHS.
 Ortin x Etta Barlow (large white).
 Claudona, Lesh x Swallow, Lorraine.
 (Swallow, Lorraine lovely large green).

Miracle x Swallow, Lorraine. HCC-AOS.

John Blowers x Ann Green.
 Vale of Kashmir x Etta Barlow.
 Ortin x Alex. West. FCC-RHS.
 John Blowers x Babylon, Castle Hill.
 Miracle x Etta Barlow.
 John Blowers x Mazatland.

Three flask packet £4/9/-. The above are all diploid x tetraploid.

Babylon, Castle Hill. FCC-RHS x Self.

Swallow, Lorraine x Etta Barlow.

Two flash packet £4/9/-.

Tetraploid x tetraploid.

Seeds pods maturing Jan. and Feb. Please make second choice.

Seed sent air mail, post paid.

Australian and New Zealand currency accepted.

WILLARD E. GRAVES

2743 KELTON AVE., LOS ANGELES 64, CALIFORNIA

THREE CATTLEYA HARRISONIANA CROSSES

Shipped out of 5 and 6 inch pots

LC. BERTII

C. Harrisoniana 'Robert' x
 C. Labiata (third generation hybrid)

LC. HIGHBURIENSIS

C. Harrisoniana 'Rose' x
 C. Mossiae 'Topper'

LC. PHYLLIS TUCKER

C. Harrisoniana 'Rose' x
 Lc. Governor Gore 'Symmetry'

Rod McLellan Co.

World renowned hybridizers — exportes — importers

MATURE AND SEEDLING PLANTS

1450 El Camino Real
 California, U.S.A.

South San Francisco
 Cable: Rodco

Complete plant listing available upon request.

LIMBERLOST ORCHID SEEDLINGS



L31 Vanda Poepoe

FROM

J. E. Jones,

"LIMBERLOST" NURSERY

P.O. FRESHWATER — CAIRNS — N.Q.

L31 VANDA POEPOE

An Exhibition quality Terete Vanda of considerable size and excellent conformation. Colour is pale rose with a bright mauve lip. Growth habit is slower than most Terete Vandas and will flower under conditions suitable for Vandas of the Nellie Morley type.

16 inch Rooted Cuttings 15/- ea.
Three plants for £2
Please add Postage and/or Air Freight.

The Shepherd Press announce another

SMASH-HIT COOKERY BOOK

from the editors of "Oh, for a French Wife!"

"Cooking for Bachelors"

by TED MOLONEY and GEORGE MOLNAR

Profusely illustrated with line drawings by George Molnar.

121 pages of Recipes and lively advice on cooking by Ted Moloney

25/- ALL BOOKSELLERS

THE SHEPHERD PRESS

•

Yurong Street, SYDNEY, N.S.W.

UNSURPASSED QUALITY
ORCHIDS

by

(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

ORCHID GROWERS !

Save Time

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year of 4 issues posted.

Agents for the "Australian Orchid Review"
in Great Britain

Messrs. B. F. Stevens & Brown Ltd.,
Library & Fine Art Agents,
77-79 Duke Street,
Grosvenor Square, W.1.
LONDON

are carrying stocks of current and back num-
bers of the *Australian Orchid Review*.
Readers in Great Britain should communi-
cate with them regarding their supplies.

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Largest Raisers of Cymbidiums in Australia

20,000 Seedlings always in Stock

Raised in Australia by Australians, bred from the best Australian and overseas parents.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 10/- to 20/-	} ex Nursery
in 6" pots from 20/- to 30/-	

Early flowering and exhibition crosses always available. Many of our seedlings are flowering in 12 months, while the balance should flower in 2 years.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Monday to Saturday, 8 a.m. to 5 p.m. Sundays by appointment only.

*Our seedlings are also available from Mr. F. Slattery, Bexley, at list prices
and Mr. H. Bond, Marmong Point, Teralba, N.S.W.*

WONDABAH ORCHIDS

724 Pennant Hills Rd.

Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

MON., DEC. 21st

MON., JAN. 25th

MON., FEB. 29th

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editors: A. R. Persson, Coronation Ave., Mosman; A. B. Porter, 14 Henderson Rd.,
Eastwood; G. H. Slade, Box 13, Homebush, N.S.W.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

FRI., DEC. 11th

FRI., JAN. 8th

FRI., FEB. 12th

President: E. A. KNOBLAUCH

Patron: Sir JOHN B. CHANDLER

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

MON., DEC. 21st

MON. JAN. 18th

MON., FEB. 15th

Patron: His Excellency The Governor of Victoria, General
Sir DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Patroness: Lady BROOKS

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide

THURS. DEC. 3rd

THURS., JAN. 7th

THURS., FEB. 4th

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: N. CHRISTOPH, 18 Clinton Avenue, Myrtle Bank.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

FRI., DEC. 25th

FRI., JAN. 22nd

FRI., FEB. 26th

Patron: Sir ROSS McLARTY, Pinjarra.

President: E. L. THOMAS, 239 Railway Road, Daglish

Treasurer: C. W. CONNOR, 42 Birkett Street, Bedford Park.

Secretary: H. W. HILL, 20 Waterford Street, Inglewood.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross.

President: F. W. Chilvers.

Hon. Secretary: Mrs. R. F. Gee,

16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review

PUBLISHED QUARTERLY

VOLUME 25, No. 1

PRICE 3/6

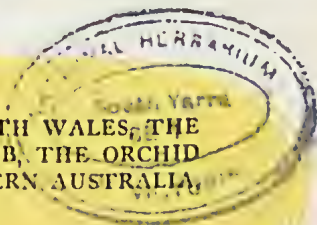
MARCH, 1960



ANGRAECUM SESQUIPEDALE

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.



Orchids and Orchid Supplies

A splendid range of all types of Orchids suitable for Bush and Glass House culture is always available.

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS at prices YOU CAN AFFORD.

TOP LINE CYMBIDIUM AWARD AND SHOW VARIETIES. Also some of the WORLD'S FAMOUS STUD PLANTS including ROSANNA PINKIE FCC RHS, RIO RITA RADIANT FCC RHS, ICARIUS EXBURY AM RHS. NAMKHAN, NAOMI, DANTE FCC RHS.

VANDAS. Top Line HAWAIIAN CROSSES including NELLIE MORLEY, JOHN NOA'S 512 CROSS.

PHALAENOPSIS. Specimen Plants in First Class Whites. Flowering Size Plants of MISTINGUETTE (ROTHMAGO X HELLE). First Class Pinks.

CATTLEYS. Large Selection of Flowering Size Plants and Seedlings.

CYPRIPEDIUMS. Big Selection of Hybrids and Species.

DENDROBIUMS. Hybrids and Species.

COELOGYNES, ONCIDIUMS, BRASSIA BRACHYATA, ODONTOGLOSSUM-GRANDE, ZYGOPETALUM-MACKAYI, STANHOPEA-TIGRINA, LAELIA ANCEPS and many others for Bush House culture in and around Sydney.

JAPANESE OSMUNDA FIBRE 3/6d. 1b. AUSTRALIAN TODEA FIBRE 2/6d. 1b. TREE FERN SLABS 4/- each. ATLAS FISH EMULSION 13/6d. pint.

TAN BARK, PEAT MOSS, READY MIXED COMPOST, PEARLITE, SPHAGNUM MOSS, WISS ORCHID SHEARS 32/6d. (Postage 9d.). MONARCH INSIDE HOUSE FOGGER 23/- (Postage 1/-).

N.S.W. Agent for WALDOR GLASS HOUSES. These houses are in use at the Nursery and may be inspected there.

Plants sent to Anywhere in Australia and Overseas on request.

Please send 5d. Stamp for Price List.

Frank Slattery

Phone
LY7985

12 EDDYSTONE RD., BEXLEY
(off Stoney Creek Rd., opp. Bexley Park)

Phone
LY7985



ETTA BARLOW

“Enchantress”

*Flowered from our cross
D.P. 4103.*

Rosanna Pinkie FCC x
Balkis Perfection

The above photograph is of the seedling Etta Barlow var. “Enchantress” which was bloomed for the first time at Deewhy, N.S.W., in September 1959. A most outstanding flower and an excellent example of the expectancy of this cross. Award types and show bench flowers are a big percentage of those flowered to date.

Seedlings, the same parentage as the above flower.

6" pot £5.10.0

8" pot £12.10.0

dos pueblos

Orchid Company
(AUST.) PTY. LTD.

DEE WHY

Telephone:
98-6321

P.O. BOX 28

N.S.W.

Situation: South Creek Rd., Dee Why, N.S.W.

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cypripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim

- Vanda Sanderiana var. Kono.
 „ Sanderiana var. Terry.
 „ Noel x Vanda Sanderiana.
 „ Onomea x Vanda Leilani.
 „ Emma van Deventer x V. Ellen Noa.
 Dend. Lady Hamilton x D. Lady Hamilton.
 „ Anouk x Dend. Anouk.
 „ Waikiki Beauty x Dend. Anouk.

25/-

EACH

2" and 3"

POT SIZE

4" to 7" HIGH

15/-

EACH

2" POTS
AVERAGE
4" to 8"
HIGH

- 830 Dendrobium veratrifolia x Dend. taurinum
 689 Vanda Miyamoto x Vanda dearei
 643 „ tricolor x Vanda Luzonica
 964 Dend. broomfieldii x Dendrobium taurinum.
 868 Vanda Miyamoto x Renanthera Storei.
 730 „ suavis x Renanthera Storei.
 772 Dend. Hawaii Nui x stratiotes.
 942 Arachnis Ishbel x Vanda Manila
 836 Dend. Schroderianum x Dend. taurinum
 1021 „ Toftii x Dend. Phalaenopsis alba.
 218 „ veratrifolia x Dend. Broomfieldii

- 836 Dend. Schroderianum x Dend. taurinum
 830 „ veratrifolia x Dend. taurinum
 964 „ Broomfieldii x Dend. taurinum
 1021 „ toftii x Dend. Phalaenopsis Alba.
 772 „ Hawaii Nui x Dend. stratiotes
 „ superbiens x Dend. Schroderianum FCC.
 1037 „ Bali x Dend. Mauna Kea.
 643 Vanda tricolor x Vanda Luzonica.
 689 „ Miyamoto x Vanda dearei
 882 „ Mary Foster x Vandopsis lissochiloides
 „ Flamerolle x Vanda suavis.
 650 „ Boschii x Vanda Sanderiana

8/-

EACH

OUT OF
COMMUNITY
BASKETS.
AVERAGE
3" to 5"
HIGH

Add Postage and Air Freight

KIRKWOODS ORCHIDS

342 SHERIDAN STREET, CAIRNS, NORTH QUEENSLAND

CYMBIDIUM ORCHID SEED FOR 1960

John Blowers (red) x Balkis, Lori.
Ortin (Pink) x Babylon, Castle Hill.
Pearl, Mag. FCC-RHS. x Etta Barlow.
Susette, Per. AM-RHS. x Ann Green.
John Blowers x Alex. West. FCC-RHS.
Ortin x Etta Barlow (large white).
Claudona, Lesh x Swallow, Lorraine.
(Swallow, Lorraine lovely large green).

Miracle x Swallow, Lorraine. HCC-AOS.

John Blowers x Ann Green.
Vale of Kashmir x Etta Barlow.
Ortin x Alex. West. FCC-RHS.
John Blowers x Babylon, Castle Hill.
Miracle x Etta Barlow.
John Blowers x Mazatland.

Three flask packet £4/9/-. The above are all diploid x tetraploid.

Babylon, Castle Hill. FCC-RHS x Self.
Two flask packet £4/9/-.

Swallow, Lorraine x Etta Barlow.
Tetraploid x tetraploid.

Seeds pods maturing Jan. and Feb. Please make second choice.

Seed sent air mail, post paid.

Australian and New Zealand currency accepted.

WILLARD E. GRAVES

2743 KELTON AVE., LOS ANGELES 64, CALIFORNIA

THREE CATTLEYA HARRISONIANA CROSSES

Shipped out of 5 and 6 inch pots

C. BERTII

C. Harrisoniana 'Robert' x
C. Labiata (third generation hybrid)

C. HIGHBURIENSIS

C. Harrisoniana 'Rose' x
C. Mossiae 'Topper'

LC. PHYLLIS TUCKER

C. Harrisoniana 'Rose' x
Lc. Governor Gore 'Symmetry'

Rod McLellan Co.

World renowned hybridizers — exporters — importers

MATURE AND SEEDLING PLANTS

1450 El Camino Real, South San Francisco, California, U.S.A. Cable: Rodco.

Complete plant listing available upon request.

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £6.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

Flowering size English Odontiodas and Odontoglossums.

Miltonia seedlings, full flowering size, at 50/-.

Hawaiian Dendrobium seedlings of the best crosses, from 8/6

Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.

French and American Phalaenopsis seedlings, ranging in price from 15/- to £5, according to size and cross.

Interesting new Epidendrum, Diacrum and Allied Intergeneric Seedlings.

Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of imported Cattleya seedlings in all sizes for you to select from. These range in price from 12/6 for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

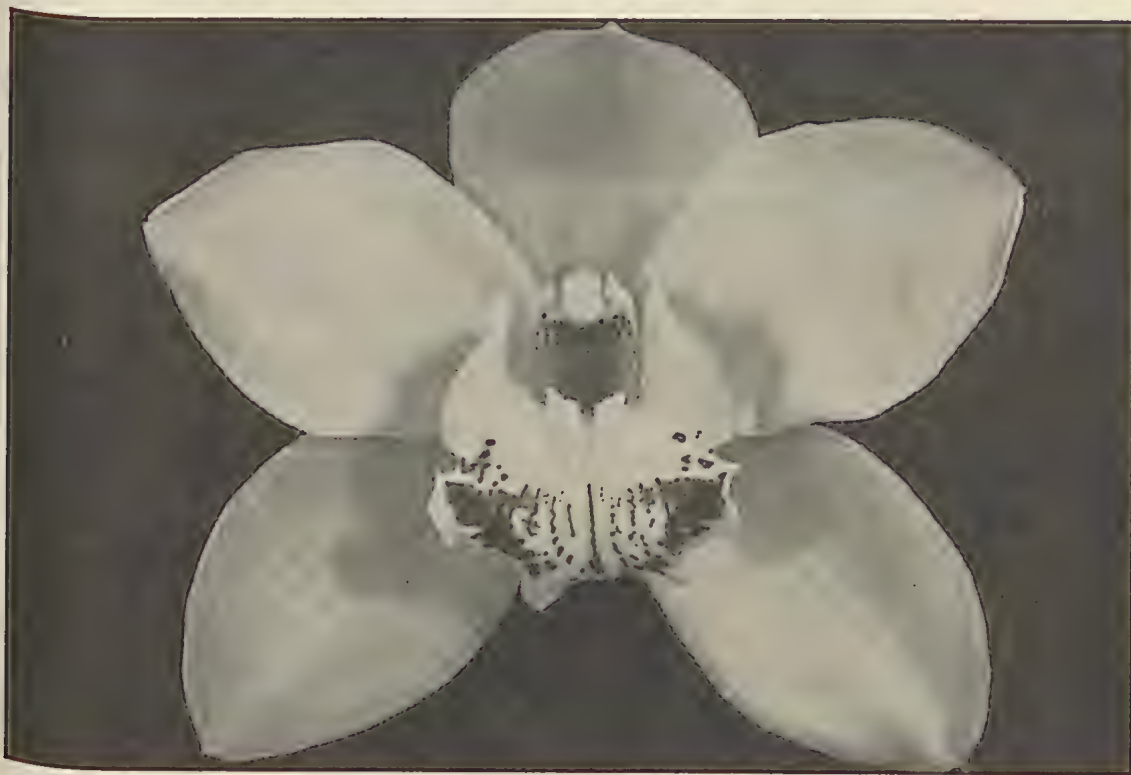
Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisosa) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

A Book for all Animal and Bird Lovers

Bush Animals of Australia

By AXEL POIGNANT

*With Notes on Birds and Reptiles by J. R. Kinghorn, C.M.Z.S.
and on Furred Animals by Ellis Troughton, C.M.Z.S., F.R.Z.S.*

Containing 40 pages, each $14\frac{1}{4} \times 9\frac{1}{2}$ inches, of magnificent
Original Photographs of the Animals of Australia.

OBTAINABLE FROM ALL LEADING BOOKSELLERS

OR FROM

THE "SHEPHERD PRESS, YURONG STREET, SYDNEY, N.S.W.

JOIN THE ORCHID SOCIETY OF N.S.W.

Membership entitles you to:—

- Twelve issues of the Monthly Circular containing Cultural Notes for each calendar month as well as a description of the various plants tabled for competition.
- A comprehensive Orchid Library—Books can be procured on loan for one month.
- Regular Monthly Meetings in the Y.W.C.A., Liverpool St., Sydney.
- A Letter Service for Country Members desiring cultural hints.
- Four quarterly issues of this Review if required.

Write for a nomination form to Secretary

K. LAMONT 42 LAWLEY CRESCENT, PYMBLE

Miscellaneous Orchids

To have flowers all through the year you must grow
miscellaneous orchids.

The following showy types now available:

LAELIAS

Autumnalis, Anceps, Cinnabarina, Jongheana, Pumila var. Praestans,
Speciosa.

ONCIDIUMS

Forbesii, Gardnerii, Varicosum Rogersii, Nona, Jonesianum, Macran-
thum, Marshallianum, Sarcodes, Tigrinum.

ODONTOGLOSSUMS

Citrosimum, Schlieperianum, Rossii, Nebulosum, Grande, Cordatum.

EPIDENDRUMS

Standfordianum, Dichromum, Vitellinum Majus, Falcatum.

SOPHRONITIS GRANDIFLORA

Cynoches Chlorochilum, Lycaste Cruenta, Lycaste species from Ecuador,
Lycaste Skinnerii.

Please apply for our illustrated brochure.

Plastic Pots in sizes 4", 5", 7", 9" for sale



Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

Country visitors
especially invited
to visit our
Nursery.

Telephone:
98-6321

P.O. BOX 28

N.S.W.



Top Quality Cymdidiums

Arabella, Magnificent,
H.C., A.M.
Arabella, Waverley, H.C.
(twice) A.M.
Balkis, Burraneer
(Like Luath)

Carisbrook, Florence, A.D.
Cassandra, Evadne, A.M.
Cassandra, Txoteth, A.M.
Celia, Tanandra (Prize
Green—Early)

Ceres, F. J. Hanbury,
A.D. (twice).
Ceres, Girrahween, A.M.
Ceres, Westminster, (spe-
cial pink).
Charm, Elegance, A.M.,
H.C. (Early).
Cordelia Kurfingai, A.D.
(Colour Champion).
Cygnus, Janet (large,
cinnamon).

Cygnus, Magnolia, H.C.
Cygnus, Opalescence,
H.C.

Dracolan, Haberfield.
Eagle, Snow White (all
white).
Esmerelda (Prize Green).

Falcon, Illawarra.
Flamingo, Allambie, H.C.
(twice).

Girrahween, Enid, A.M.,
1st Class Certificate.
Girrahween, Gloria, A.M.
Gloriana, Tudor Rose,
(The Champion Pastel
Pink).

Historian, Lindfield, H.C.
Ispahan, Mascot, H.C.
(twice).
Joyance, Cinnamon, H.C.

Joy Sander, Ruth, H.C.
Joy Sander, Triumph.

Louis Sander, Girrah-
ween (A Champion
Pastel Pink).
Louis Sander, Kirribilli
A.M. (twice).

Miranda, Maisie A.M.
Nirvanah, Warringal, H.C.

Peri. Good Big Yellow
Lime Green.
Plover, No. 1 (Excellent
Green).
President Wilson, Haber-
field.
Princess Elizabeth, The
Giant.
Princess Elizabeth, Reece,
H.C.

Princess Margaret, Hab-
erfield.
Priam Ada Meech, H.C.
(Twice).
Profusion Violacia. (Pink
Champion).
Promona Tanandra, A.D.

Sandpiper Dorothy, H.C.
Sussex, Laelia Sasso,
H.C. (twice), A.D.,
A.M.

Swallow, Conquest, H.C.
(twice).
Swallow, Daffodil, H.C.
(twice), A.M.
Swallow, Magnolia, H.C.
Swallow, Soulangiana,
A.M. (twice), H.C.

Thora (late English
crossing).

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS: Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points of Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS": Available free on request.

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Orchid Specialists in Australia

37 Dobroyd Parade, Haberfield (Sydney), N.S.W., Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2531

Australian Orchid Review

MARCH, 1960

VOLUME 25

No. 1

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Editorial	12
Cymbidium culture to beat sun burn— <i>L. Giles</i>	13
A Strange Incident— <i>Sir John Hall Best</i>	14
When you feed your Cymbidiums— <i>A. B. Porter</i>	15
Odontoglossum grande— <i>F. Jones</i>	16
Cypripediums in and around Sydney	17
Dendrobium Pierardii— <i>F. Jones</i>	18
Third World Orchid Conference	18
The Epiphytes have come into their own	19
Bifrenaria Harrisonii— <i>J. N. Rentoul</i>	28
Worth Observing	28
New Sanders Hybrid List	29
Dendrobium Fusiforme	30
Starting a Collection	31
Orchid Atmospherics	32
Den. veratrifolium	33
Housing	34
Orchids—anyone	35
Orchid Notes from Tasmania— <i>F. W. Chilvers</i>	36
Non-Orchidaceous Epiphytes	37
New Orchid Hybrids	40-42

ILLUSTRATIONS

Odontoglossum Cervantesii	23
Odontoglossum Pendulum	23
Epicattleya Elena Castaneda	24
Cattleya Loddigesii	24
Oncidium Varicosum	25
Grammatophyllum Papuarum	25
Epidendrum nemorale	26
Bulbophyllum Barbigerum	26
Angraecum Sesquipedale	Front Cover

Editorial Committee: G. Hermon Slade, A. B. Porter, A. R. Persson, J. C. Davis.

Please address all Editorial Matters to:

G. HERMON SLADE, Box 13, Homebush, N.S.W.

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

W. Harris
17 Old Belair Rd.,
Mitcham

WESTERN AUSTRALIA

A. C. Dawson
17 Alness St.,
Applecross

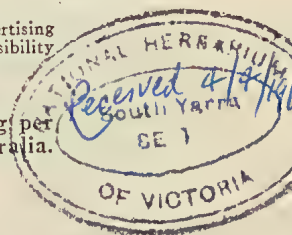
TASMANIA

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Sehptherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.



Editorial

• With this issue we have broken new ground, though only slightly. We refer to the inclusion of notes on non-orchidaceous epiphytes by Mr. York Meredith. The idea crystallized from requests from readers who pointed out that all Orchid Societies encourage the inclusion of *Authuriums* and, indeed, foliage plants to embellish the show tables. The orchid house is similarly in need of ornamental plants to soften the somewhat harsh appearance of most orchids when not in flower. Some hints on the growing of epiphytic plants should prove helpful to many orchid growers. Hence this slight departure from the austere conservatism of the past. Please be assured that our intention is merely to set aside very limited space for matter not strictly orchidaceous. We shall be very happy to have our readers views on this innovation.

We would also be very happy indeed to receive some unsolicited contributions for inclusion in the Review, particularly on items dealing with *Cymbidium* culture in all its aspects. Have you any proven ideas of how to minimize the serious losses caused by spotting of flowers and other disabilities? Do we agree that we grow far too many plants of inferior quality? These plants consume the same amount of labour, material and space as plants whose blooms are appreciated here and overseas. Your views please.

Who will tell us his experience in growing *Cymbidiums* in beds instead of pots, either on the ground or elevated? Did your *Cymbidium* suffer from blackening bulbs and bottom part of the leaves when you used galvanized wire mesh as shading material?

Did you observe increased number of spikes when you reduced shading to a minimum? These and many other problems harass many growers.

Export of flowers has a decided national aspect. The more perfect blooms, the fewer mediocre ones we export the *higher standing* and better returns will be realized overseas. There is a close similarity between export of flowers and export of any other primary products. When we in the early days shipped prim-

ary products haphazardly without effort at grading the prices were so poor that the Government had to step in and control the export. Will the export of flowers go the same way?

Let us have your views.

We invite your special attention to the letter from Sir John Hall Best, President of Orchid Society of N.S.W., appearing in this issue regarding his suggestion to form Australian Federation of Orchid Societies.

Our Editor-in-Chief Mr. Hermon Slade is at present on a round the world trip, on business bent. It goes without saying that he will lose no opportunity to renew old orchid acquaintances and make new ones. He may, if luck holds, attend the London Orchid Conference.

We have no means of estimating the number of orchid enthusiasts who will be attending this very important 3rd International Orchid Conference in London May, 1960. The importance of these conferences is very great indeed. It is striking evidence that the Orchid "Industry" has grown up, that it feels the need for these gatherings where the best brains and the most experienced hands meet and hammer out the many problems that beset the growing of Queen of Flowers for the benefit of everybody. The first conference was held in St. Louis, U.S.A., in 1954 followed by the second at Honolulu, Hawaii, in 1957.

The London conference has been timed to coincide with the famous Annual Chelsea Flower Show with a view to add an attraction for the flower-loving holiday maker who may also be counted an orchid grower.

The lifting of import restrictions permitting a freer issue of import licences from all overseas countries may be counted among the best news the press has brought the orchid grower for many a day. You will now be able to study the catalogues and make your selection to satisfy your fancy without the restraining doubt whether a licence would or would not be granted. In the writer's view this is far too good news to last very long.

Cymbidium Culture to Beat Sun Burn

LEO GILES

• The recent heat wave lasting four days with temperatures ranging from 103° to 108° caused a great deal of concern to many Cymbidium growers in New South Wales, many had their plants more or less scalded, and in some cases causing complete defoliation.

Fortunately we suffered no burn except an isolated leaf, which is quite normal, and moderate burn on half a dozen pot bound seedlings, which in any case should have been burnt under the boiler.

Any Cymbidium that does not flower in five years from the flask is useless in my collection, as we grow them for flowers not leaves.

Direct filtered sunlight is essential to maximum flowering, reflected light does not give the same results, and I feel that it was not the direct sunlight that caused the damage so growers must look for other causes. Unless, of course, the location was in a low lying pocket with no air movement at all. I would advise growers to check their compost, construction of the bush house and the watering system.

Following are a few suggestions for the unfortunate grower whose plants suffered in the record heat.

Composts: Are and always have been a very controversial subject. However, it is essential that whatever components are used the physical property of compost must be of such character as to allow for perfect drainage without the old idea of crocking the pots, except for one piece of crock to prevent the compost falling through. It must resist breaking down for at least two years, accept water readily without going soggy. We consider peat moss ideal as a base and rice hulls a perfect addition for drainage, and then add whatever other ingredients the grower fancies.

Manuring: Again a controversial subject, some argue in favour of fowl manure, others artificial manuring, both have their virtues, but one or the other is essential. However, excessive manuring does cause extreme vegetative growth, which becomes soft and subject to sunburn in the summer and definitely is not conducive to flowering.

Spraying: Regular spraying for red spider is advisable through summer months; though extreme care must be maintained we find.

Metasystox is the best spray for all sucking insects, but use a mask and rubber gloves.

Watering: The plants must be kept wet through the summer months especially. A good type of overhead mist spray which soaks every plant is better than hand watering, as some plants may only get wet on the side of the pot facing the gardener. Overhead sprays also thoroughly wet paths, etc., which is most beneficial during extreme heat.

Bushhouse construction: The roof is essential to the plants well-being and especially maximum flowering. Fine woven materials are excellent at midday, but a couple of hours before and after this time, owing to the angle of the sun, the plants only receive reflected light and not direct sunlight, this also applies to 2in. x 1in. batten roof. With brush roof it is nearly impossible to cover the roof evenly. We use and can recommend a roof comprising 2in. aluminium strip spaced 4in. apart, and overall a covering of half inch galvanised wire as hail guard. This wire also gives about 5% of shade. With this class of roof your plants will get 62% direct sunlight all day long. It is essential that the strips run north and south to get alternate sun and shade.

It is good practice to allow for your pathway to be around the inside of your walls; this tends to eliminate any pockets of stagnant air and avoids reflected heat from glass walls which could cause burn in heat waves, especially on the western side.

In large areas the plants do better on ash beds rather than benches; their contact with the ground (ash) keeps a more even pot temperature and more even moisture content; in small areas this may not be practicable as benches may be essential for the plants to receive a full ventilation and the required sunlight.

A final warning, do not use excessive shade, which causes soft growth which is liable to scald; and often retards flowering.

724 Pennant Hills Road,
CARLINGFORD, N.S.W.

• Orchid Society of Southern California Review has made its appearance. It looks interesting and promising.

Editor: Mrs. L. Gold, 618 North Crescent Drive, Beverly Hills, California, U.S.A.

A Strange Incident

• The Editor,
Australian Orchid Review.
Dear Sir:

The advertising columns of the *Sydney Morning Herald's* issue of 23rd January, 1960, contain a notice of "a meeting of intending members for the newly formed Australian Orchid Society which is affiliated with the Australian Orchid Association inaugurated on 19th January, 1960 . . ."

The newspaper reader is invited to believe that the newly formed Society is affiliated with a national or central Association designed to link together in a constitutional manner the respective Societies or representative societies in all the States of the Commonwealth of Australia.

The Orchid Society of N.S.W., which is the parent body in this State, with a membership of 670 and having 30 affiliated Societies, was not invited to attend any meeting on the 19th January, 1960, for the purposes of inaugurating an Australian Orchid Association.

I telephoned Mr. J. R. McArthur, the Secretary of the Victorian Orchid Club, to ascertain if that senior and representative Club had received any invitation to or notice of the meeting convened to form an Australian Orchid Association. Mr. McArthur emphatically advised me that the Victorian Orchid Club was unaware and uninvited.

No proposed Constitution was available for perusal and from the statements issued at the meeting of intending members it would seem that some of the objects were very good. But it would also seem that the only Society affiliated with the Australian Orchid Association was the Australian Orchid Society and that Society had only twelve members, who all came from the Sydney area. Several more local members joined and the view was expressed that some half dozen members could be enrolled from both Victoria and South Australia and that was sufficient to warrant the appropriation of the name "Australian".

It now seems quite evident that the convenors of that inaugural meeting did not contemplate a national Association in which the existing State Societies which have been long established and which speak for so many orchid enthusiasts, voluntarily associated as component members with a proper recognition of State

rights. The title "Australian Orchid Association" certainly seemed as though it were intended to convey that impression and that it would be entitled to speak for the whole of Australia.

This strange incident does, however, direct the attention of State Orchid Societies and Clubs to the advisability and wisdom of forming an affiliated Federal organisation in which all State orchid bodies would be represented.

The object would be to uphold the honour and unity of Orchid Societies throughout the Commonwealth, encourage cordial intercourse among the Societies and the members, disseminate the cultural news and all other matters of interest to all orchid growers. Then we could speak with one national voice when the occasion demands and phantom organisations inferentially making unjust claims to represent us on a national level could no longer indulge in such obvious deception.

Yours truly,

JOHN HALL BEST,
President,
The Orchid Society of N.S.W.

FRANK SLATTERY FOR THE LONDON 3rd ORCHID CONFERENCE

• Australian orchid growers will be pleased to learn that Mr. Frank Slattery, one of the best known orchid identities in Sydney, will be attending the World Orchid Congress in London in May of this year. By invitation of the Royal Horticultural Society, he will read a paper entitled "Cymbidium Judging in New South Wales". During his absence overseas he will visit establishments in Singapore, England, The Continent, U.S.A. and Hawaii.

Mr. Slattery has been a member of the Judging Panel of O.S.N.S.W. for a considerable number of years, also a member of the Committee, and during the early years of the Orchid Festival in the Sydney Town Hall he ably filled the important position of Marshal of the Festival.

This journal joins his many friends in wishing Frank a successful and enjoyable trip.

When You Feed Your Cymbidiums

A. B. PORTER

• The spate of new composts, new techniques, new feeding programmes advocated for the cultivation of Cymbidiums must be very confusing to most growers and particularly so to new growers. A few years ago tanbark and leafmould were the basis of practically all growing mixtures and anyone who wanted to fiddle with the orthodox formula added a bit of this or that, usually without making much difference one way or the other.

The age of tanbark began when it was found to be a good compost for Cypripediums — a purpose for which it is still used by some of our best slipper growers. Prior to that, different growers used leafmould, spent hops from the breweries, cow manure, decomposed sawdust (yes, even then!) and various other organic materials in different mixtures, and most of the mixtures grew Cymbidiums fairly well even in that pre-Westonbirt era.

The principle behind this method was that the components of the compost gradually decomposed and the plant roots absorbed the dissolved salts produced by the decay of tanbark, leafmould and other such materials. In this way the plant obtained its nitrogen, potash, phosphoric acid and the lesser mineral requirements, but in the process the whole mixture gradually broke down.

During the last few years many growers have brushed aside all these older methods and are basing their cultivation on heavy feeding in one of a number of forms, with results that are often dazzling but sometimes disastrous. Several important factors are involved in the success or failure of a feeding programme and none of them can determine the result except by interaction with the others.

No plant can absorb unlimited quantities of fertiliser, so when large amounts of animal manure are given, heavy watering is essential to protect the plants from the excessive amounts of soluble materials formed by the rapid breakdown of the manure. Many growers have found that after potting plants in a compost containing ten per cent or so of fowl manure the root system rapidly collapsed. This happened because the grower allowed the products of decomposition of the manure to build up in the compost instead of washing them out with lots of water. But, you may say, why put in

so much manure if you have to spend all your time washing it out again? Why indeed!

But the manure has another important effect. The rapid breakdown of the manure itself is brought about by the flourishing growth of bacteria and fungi which convert complex materials to soluble nutrients the plant can use. But these same bacteria and fungi strongly attack many of the organic materials used in composts and reduce them to mud.

The manure nourishes and encourages the little organisms and greatly hastens the collapse of the compost. For this reason the old mixtures of tanbark and leafmould have largely given way to materials which can defy the organisms of decay, and present-day composts usually contain peatmoss, rice hulls, sand, perhaps vermiculite, none of which contribute much if anything to the plant's nutrition. They are there as support for the plant and as a vehicle to carry the added fertiliser. They are useful because they do not rot away quickly and for this reason they retain their porous texture for a long time, allowing free circulation of air and water through the root region.

Also the level of compost in the pot does not sink so rapidly but remains at proper working level for a much longer period. The fact that these composts do not sink so rapidly is very useful when Cymbidiums are grown in beds. With a mixture that breaks down rapidly a bed nine inches thick can subside to half that in a couple of years and the leeway is not as easy to make up by topping as for pot-grown plants. In a pot the roots tend to anchor the plant at the right level and the compost shrinks away exposing roots and allowing the pot to be topped up with new mixture. In a bed the plant and growing medium move down together as the latter shrinks and topping would only bury the bulbs.

A most important aspect of bed culture of Cymbidiums is provision for the escape of surplus water in such a way that it cannot return to the bed by capillary action. Unless the underlying ground is sand or gravel, drainage pipes or six inches of ashes under the bed, or both, will be required. Some beds have been built up on benches so that water can run through as it does through pots. If there are big trees nearby the bench idea has the added advantage of avoiding invasion by tree roots

which can crowd out the plants and steal most of your added fertiliser.

Cymbidiums always require plenty of light if they are to flower well, but increased feeding, particularly if the fertiliser is rich in nitrogen, will make the plants hungrier for light and if they are heavily shaded they will produce plenty of dark green soft foliage but few flowers.

These, then, are the interacting factors which control success or failure when the newer techniques are used for growing Cymbidiums.

The heavier the feeding the faster the compost will break down, hence the need for a mixture which will resist this action.

The heavier the feeding the more watering

is required to prevent accumulation of salts and the resulting damage to roots.

The heavier the feeding the more light the plant will need to ripen its bulbs and promote flowering.

I feel that most of our new methods have been evolved on a system of "try it and see if it works", in fact, sometimes more or less by accident, and while fine results have been obtained, sooner or later more refined methods will be worked out whereby equally good results can be produced by giving the plants only as much as they need so that composts will last longer and watering can be more moderate, without loss of growth in the plants or of quality in the blooms.

14 Henderson St., Eastwood, N.S.W.

Odontoglossum grande

FRED JONES

• Cymbidium growers who are desirous of adding a few hardy miscellaneous types to their collection could start with *Odontoglossum grande*, which is of easy culture and does not require the constant attention of *O. crispum* and allied species.

This hardy *Odontoglossum* grows and flowers very well with the same cultural treatment as Cymbidiums, the same compost and light intensity, with a little feeding during the growing season doing no harm. In fact, if *O. grande* is placed on a bench amongst the Cymbidiums with the leaves giving a little added and moving shade, it will respond to perfection.

A small growing plant compared with the larger Cymbidium, *O. grande* commences to grow in the spring and grows rapidly during the summer months with the new bulbs and flower spikes forming in late February. During this time treat your plant just as you would a Cymbidium, plenty of water with an occasional application of fertiliser.

With the advent of late February the plant can be moved into your glass shelter and the watering gradually reduced. The flower spikes will come from the base of the newly formed bulbs, up through the fleshy protective sheath which enfolds the young growth.

Approximately six to eight large bold flowers are carried on the erect racemes, the petals and

sepals are a deep yellow with heavy dark brown bars, the small lips are generally a pale yellow or cream shade with a few brown spots at the base. The whole flower has a very glossy finish, which makes *O. grande* a very desirable addition to a collection.

The flowers last in full beauty for about three weeks, after which the spikes should be cut and the plant allowed to rest until the following spring. Very little water is then needed, as the plant has completed its growth and flowering cycle.

An equally fine and closely related species to *O. grande* is *Odontoglossum Williamsianum*, which has similar cultural requirements, but has a different flowering habit.

O. Williamsianum makes both the new lead and flower spike at the same time and subsequently flowers in the summer months instead of the late autumn. Individually the flowers are more compact than its cousin, although the colouring is very similar.

Here, then, are two easily grown and flowered species from Guatemala, each with a different flowering period of the year, so give them a try and at the same time discover the pleasure of growing a few miscellaneous orchids.

48 Wareemba Rd., Abbotsford, N.S.W.

Cypripediums in and Around Sydney

T. W. HENRY

• Why is it that with such a large number of keen Cymbidium growers in New South Wales there are so few who grow Cypripediums?

At most winter shows conducted by the Orchid Society of New South Wales you can count the number of exhibits on your fingers; admittedly some of these exhibitors are large growers and are able to stage quite a display, much to the delight of the general public and also the New South Wales Orchid Society.

Does the average Cymbidium grower think Cypripediums are hard to grow? Are they a genus which need specialist treatment? Or is it because they do not appeal as a commercial proposition?

These are questions which have intrigued me for a considerable time. While I do not for one moment wish to convey the impression that I am an authority on growing these particular orchids, over the years I have certainly learned a little about them, their likes and dislikes, and, in fact, their habits in general; hence my desire to write an article which is intended to try to stimulate more interest in growing these plants from which I have gained so much pleasure.

Cypripediums, like most orchids, must have a suitable house in which to grow and flourish, some varieties do grow under bush house conditions in Sydney, but I do not want to mislead anyone when I say, some varieties, as the number which will grow and flower under these conditions is rather small. Quite a few growers heat their glasshouse in winter and by so doing may get a little longer spike or a little larger flower, but some of our largest Cypripedium growers have plenty of success with an unheated glasshouse.

My advice is to build a glasshouse about 12 feet by 12 feet, preferably running north-south. The sides can be built to a height of 4 feet with flat fibro sheets. The gable roof made of glass can be run from that height giving particular care to the height of the gable from an aeration point of view. I would also suggest leaving an inch space between the glass and the fibro sides for this reason. The ends of the house should be enclosed with glass, and the benches should be about 2 feet high; the floor can be ashes, tan bark or concrete. I would sug-

gest ashes or tan bark, which hold dampness so much better than concrete.

The glass must be painted or sprayed with a white emulsion paint and, for extra shading in the summer months, hessian tacked along underneath the glass will give the plants the desired shading, while during winter this *can* easily be removed.

The most important factors in growing any orchid with success is firstly light, secondly aeration and thirdly sufficient water. These factors are particularly so in growing Cypripediums.

Do not overpot. They grow quite well and flower to perfection in a small pot of 4in. size. Over the years a great variety of composts have been used; most of them with success. I have found they grow quite well in a mixture of the coarser parts of sieved tan bark. For the last four or five years I have been growing them in broken pieces of tree fern and have found they do particularly well, possibly because slippers must have sufficient aeration to the root system and this is a wonderfully open medium for them. Another good point about this mixture, it will not break down too quickly and if needed you can leave the plant growing for at least a couple of years without disturbing it. Cypripediums do not like to be cut into small pieces, you need at least three growths on a plant before attempting to separate it and then the best way to break it is to back cut it in the pot. By the time the next potting season comes around you will find the back cut already an established plant.

These plants need plenty of water in the summer months, which is also the growing period. They must not be allowed to get really dry as they depend so much on their root system to give them enough to live on, nature not having provided them with a pseudo-bulb.

When flower sheaths appear it is unwise to continue to water overhead, the flower sheaths which come up in the axils of the leaves are easily damped or rotted off in this way, which is most disappointing after waiting twelve months for a flower.

The Cypripedium flower is one of the most specialised and distinct of the orchid family, with a marvellous colour range and a lustre

Continued on page 36

Dendrobium Pierardii

FRED JONES

• One of the most spectacular and free flowering orchids from India is *Dendrobium Pierardii*, which is mostly found in the Sikkim and Sylhet Provinces.

Of pendulous growth and deciduous habit, this plant is easily managed in the cool glass house if the simple cultural requirements are understood by the grower.

This *Dendrobium* can be potted in the conventional fibre or coarse tanbark mixture, but as the growth is pendulous the plant must be suspended from a rafter, so that the growths can extend and hang down.

Dendrobium Pierardii commences to grow in the late spring and sends out very soft and fragile leads which are very prone to damping off if water is carelessly applied to the plant. However, with a little care and if the plant is watered carefully at the edge of the pot no harm will eventuate.

Soon the leads will be about two or three inches high, they will have become thicker and stronger, and this increased strength will allow the plant to be watered more freely. Liquid manuring can be commenced to build up the new growth, for the longer and stronger

growths will give a more spectacular flowering in the spring.

As the growth matures in the autumn, feeding and watering can be reduced until the terminal leaves are formed at the tip of the new canes. Now that the growth has finished, hang your plant up in a position so that it will receive water only by intent, not by the general watering of your glass house.

Keeping the plant dry, with only a very occasional light watering of the compost, will see a hardening and ripening of the plant, the leaves will discolour and fall, and in the late winter months the nodes will swell and break out, each with up to four tiny buds which, with the arrival of spring, will reward the grower with a glorious display, as the smallish flowers with pink sepals and petals and a contrasting yellow scoop-shaped lip entirely cover the canes with a delicate profusion of blossom.

Dendrobium Pierardii is a very worthwhile species to grow as its simple cultural requirements amply repay the enthusiastic grower with an unequalled floral display each spring.

48 Wareemba Rd., Abbotsford, N.S.W.

Third World Orchid Conference, London, 1960

• *THIRD WORLD ORCHID CONFERENCE, LONDON, 1960*: — The Third World Orchid Conference, which is being sponsored jointly by the American Orchid Society, the British Orchid Growers' Association and The Royal Horticultural Society, will be held in London in 1960. The first conference was held in St. Louis, Missouri, U.S.A., in 1954, and the second in Hawaii in 1957.

The exhibition of orchids arranged in connection with the Conference will be staged at the Chelsea Show on Tuesday, Wednesday, Thursday and Friday, May 24-27, and the Conference will be held in the following week on Monday, Tuesday, Wednesday and Thursday, May 30 and 31, June 1 and 2. It will be

followed by excursions to leading orchid growers' establishments on Friday, Saturday and Sunday, June 3, 4 and 5.

A joint committee of the three sponsoring bodies is arranging a comprehensive programme covering a wide range of subjects of interest to amateur and professional orchid growers and well-known authorities from many countries are being invited to deliver papers on the subjects in which they have specialized.

All who are interested, whether members of one of the above-mentioned organizations or not, will be welcome and are invited to notify:

The Secretary, The Third World Orchid Conference, C/o The Royal Horticultural Society, Vincent Square, London, S.W.1.

The Epiphytes Have Come Into Their Own

G. HERMON SLADE

• For years I vainly tried to grow *Oncidium varicosum* to find that no matter what compost was used, nor in what position in the glasshouse, this delightful plant gradually flowered itself to death; for although new roots appeared they rotted on contact with the compost, while new leads rarely produced a pseudo-bulb as they usually damped off.

In a last and desperate attempt to try something which would clearly need to be different as all normal methods had failed, the sick little plant was affixed to a Frangipanni tree. Thus began one of the happiest phases of my orchid hobby, for almost overnight the plant looked better; while within a few months, leads, roots and dark green leaves appeared from the impoverished old pseudo-bulbs.

I wrote to my friend Walter Doering, of Sao Paulo, Brazil, once Curator of Berlin Botanic Gardens, and now a retired coffee grower, telling of the initial success. He answered that *O. varicosum*, wonderful in flower, is disappointing in cultivation, in fact, he knew of no plant surviving five years' cultivation.

This seemed a challenge and as the plant became stronger I obtained numerous South American *Oncidiums*, including *O. crispum*, which is also considered a difficult subject to keep alive in cultivation; to find in general that the more the plant was accredited with being difficult to grow, the easier it grew outside, either affixed direct to the Frangipanni tree or suspended on a fibre block. This initial success quickly produced a problem, for previously I had no space in my glasshouse, now there was not a square inch of Frangipanni that did not have its orchid.

Winters came, at first with much apprehension lest the full sun, winter's rain and westerly gales would wreck the plants. It was easy to imagine plants enjoying summer under the shade of the tree, but bleak, windy, dry and unfriendly winter was different. Then there were those burning October days that herald in summer often followed with a cold southerly change. Poor orchids, how would they fare with as yet no leaves on the Frangipanni and facing the full blast of unpredictable spring?

They had rested over winter as I had never seen in a glasshouse. For three months they

were sound asleep, no root growth, no new leads, but with highly sun tanned leaves. In October, despite the boisterous weather, they produced remarkably strong active roots and leads more numerous and rigid than I had ever seen before.

Numerous winters and springs have passed since, each year sees the plants stronger and better, some have become so aggressive, for example, *Epidendrum ciliare*, and a strap leaf Vanda hybrid which was used as a "guinea pig", that they have to be regularly trimmed. There are now over a hundred distinct orchids which would total about 400 plants, all growing well, sharing root space and seemingly helping one another on the kindly host tree, the Frangipanni.

Having exhausted all available bark space, I tried plants affixed to blocks, hooking those on to the horizontal branches. Soon the Frangipanni supported another couple of hundred plants. Success was so real that I finally tried affixing the blocks onto a north wall, then an east wall and finally a west wall, the latter so windswept that no shrub at its foot would survive the winter and spring gales.

However, all this space now has its orchids; my losses in outdoor culture have been but a mere fraction of indoor. All the plants are of a robust habit never seen in glasshouse culture.

Think of the hundreds of people living in flats—how easy to have a wall decorated with orchids affixed to treefern blocks. A garden of fascination that never needs weeding—almost a gardener's dream!

As time has gone, more and more plants have been tried, including epiphytes other than orchids. Bromeliads look magnificent growing high up on a tree, often sending their flower spikes well above the foliage. One huge Puya attracts Honey Eaters for the several months that its flowers remain in beauty. The same plant has epiphytic moss and ferns growing from its base where seepage from its water supply in its leaf sheaths provides the necessary conditions for epiphytic Selaginellas, etc. Epiphytic cacti, such as the Epiphyllums and Zygocactus, grows readily, making a lovely display among the orchids.

The balance of orchids, epiphytic cacti, epiphytic ferns, mosses, Bromeliads, Philodendrons and Columneas make a fine spectacle that is fascinating, interesting, beautiful and remarkably easily maintained.

Anyone with a Frangipanni, Erythrina, Casuarina or Ficus can create an epiphytic garden. It merely requires regular watering and occasional spraying with fertiliser.

Although not as natural a method, blocks or pieces of driftwood with Bromeliads, Epiphyllums and orchids will grace a wall or fence on which no other plant would succeed, in a manner which will delight the beholder and collector alike. As in a glasshouse, the more plants the better they grow, so with a host tree or wall; the only difficulty is to extend the pocket to meet the potentialities of outdoor culture of Epiphytes.

The following list is some of the hundred and sixty plants which flowered last year. It is only a start, for almost any genus will provide species or hybrids which will grow in the outdoor Epiphytic garden. Phalaenopsis and Spathoglottis are among the few genera which find the conditions of Sydney too severe. Who would have imagined that *Dendrobium atrovioleaceum* from sea level in New Guinea would neighbour with *Masdevallia Vietchiana* from Peru, where it grows at 13,000 feet, far above the treeline, in continuous cool. Yet the *Masdevallia* is but one of the many strange neighbours of the group of exiles encompassed within one Frangipanni.

Finally, the seedlings. Who would have expected seedlings of Oncidiums, Vandas, Cattleyas to germinate among the plants? Hundreds of them have found a niche and are growing well. As for Epidendrums! They and Begonias are the only noteworthy weeds.

Aerides vandarum scrambles among the branches. Its terete leaves and shapely white flowers make it a worthwhile distinct orchid. It flowers in September.

Angraecum falcatum from Japan is a charming miniature with snow white flowers spreading from a common centre, skyrocket fashion. It is deliciously fragrant at night.

Bulbophyllums make excellent fill-ins. Like grass in a lawn, they can fill in between other plants adding beautifully to the "epiphytic" look. Some such as *B. barbigerum* make fascinating effects when in flower for the labellum is constantly moving as if animated. It attracts a small fly which remains on the plant continuously while it blooms.

Brassavola. All the *Brassavolas* seem to do well outdoors. *B. Digbyana* produces its remarkable fringed flowers which in the bud stage are equally extraordinary in December. Its leaves are glaucous as is if flour dusted—as is *B. glauca*, which grows equally easily.

The terete *Brassavolas* like *B. Perrinii* and *B. nodosa* and *B. cucullata* require careful hardening, for despite their rush-like foliage they burn easily. Once conditioned, they revel in full sun and produce shapely perfumed flowers in December and January. The name Lady of the Night suits them well.

Cattleyas. All the South American *Cattleyas* do well. *Cattleya Loddigesii*, for example, increases spectacularly and blooms several times a year. *Cattleyas intermedia*, *C. Harrisoniae*, *C. Aclandiae* all succeed similarly grown in full sun on a north wall. It is likely that numerous hybrids will do well, they require only careful hardening to accept and revel in open air evening dew and morning sunshine. *Cattleya Bowringiana* and *C. Skinneri* have proven themselves easy; while the notoriously difficult but fascinating *Cattleya citrina* produces its pendulous lemon coloured and lemon perfumed flowers in October-November. Its glaucous foliage is quite pendulous. It is considered a real challenge in cultivation, but I am hopeful that affixed to a block on a north wall it will bring success.

Dendrobiums. This extensive and sometimes rather capricious genus responds remarkably to outdoor culture. Delicate leafed plants like *D. Devonianum* grow well on the Frangipanni, sending long stems among the other plants. Similarly, *D. crystallinum*, *D. amoenum*, *D. transparens* and such soft leafed plants grow far better than in a glasshouse. Even the difficult but wonderful *D. Falconeri* grows well affixed to a treefern block provided it is open and capable of drying out each day.

The more fleshy leaf types such as *D. Parishii*, *D. primulinum*, *D. crepidatum* and *D. nobile* and its numerous hybrids, *D. aureum*, *D. Findlayanum*, revel in full sunshine as mentioned under *Cattleyas*. They rest in winter, many being deciduous, and make a delightful display in spring.

The clovate types such as *D. densiflorum*, *D. thyrsoflorum* and *D. chrysotoxum* grow easily in any conditions of about 50 per cent sunlight.

The nigro-hirsutes like *D. Jamesianum* and even *D. formosum* like full sun, the latter takes sun all day when properly conditioned. Its hybrids like *D. Nellie Sander* are among the

best orchids for outdoor culture for they are almost continuously in bloom and develop into huge healthy plants such as one never sees under glass.

Even some New Guinea plants grow encouragingly. *D. atrovioleaceum* succeeds despite the great difference in latitude of Sydney and Rossel Island where it grows in nature. Its flowers last a full four months. *Dendrobium Johnsoniae*, which is closely related, also succeeds; better, in fact, than I have seen in New Guinea, in which country it is indigenous.

Our own indigenous orchids are rather capricious, in fact, they are among the difficult plants to grow in comparison with the true exotics. However, *D. linguiforme* and *D. cucumerinum* and other small plants make good fill in between larger orchids. They require less water than many exotics so they should be affixed to wood blocks rather than onto fibre slabs.

Epidendrums are reputedly famous for their ease—however, they are not in fact easier than many *Cattleyas* or *Oncidiums*. During January's heatwave, they alone suffered heat scalding, all the other plants, even those exposed to full sun, came through unscathed. Among many delightful *Epidendrums* are *E. nemorale*, which produces large rose pink flowers in late spring, *E. prismatocarpum* with remarkable spotted flowers, blooms in November. *E. Pfavii*, which is a six feet giant producing drooping thyrses of rose flowers, all through the summer. This plant can be cultivated as a terrestrial in front of the epiphytes on the wall. *E. vitellinum* is a glowing gem whose orange flowers last months on end. It grows easily affixed to a block or direct on the host tree. *E. Endresii* is a gem, but is rather capricious. Try it suspended amongst the branches in open *Cymbidium* soil in a small pot or basket.

Laelias are among the easiest orchids to grow outdoors. Although many have a bad reputation as glasshouse subjects, try these self-same "difficult" plants facing west into all that blows, rains and suns.

Laelia autumnalis thus succeeds magnificently as does *L. anceps*, *L. albida* and *L. Gouldiana*. All these plants produce attractive *Cattleya*-like flowers in autumn, with satiny, crystalline sepals and petals. *Laelia majalis* (*L. speciosa*) is a fine orchid. Its huge eight-inch flower comes from a walnut-sized pseudo-bulb in an

almost unbelievable manner. It is amongst the showiest of all orchids. It flowers in November and grows in the same conditions as the autumn flowering *Laelias*. *Laelia superbiens* grows well amongst rocks, like our rock lily, at the base of a wall. It produces a tall inflorescence of about twelve rose-coloured flowers with a lip attractively barred in with deep rose purple on a rose base. The middle of the lip is bright yellow. The anther caps are yellowish, set on a rose-coloured column which gives each flower a rather amusing aspect as if they were eyes peeping through the lip.

This orchid is subject to freezing conditions in its native habitat; it increases freely, treated just as our rock lily, growing in leafy debris among sandstone. *Laelia purpurata* is a grand *Cattleya*-like species. It grows impressively and easily on blocks or on the branches sending its thick roots far and wide. Its flowers are large and highly attractive with pale purple or white sepals and petals embellishing the rich purple lip which has clearly pencilled and even darker lines. There are numerous varieties of this fine species. *Laelia primula*, meaning "dwarf *Laelia*", is a miniature plant with a shapely impressive *Cattleya*-like flower. It is easily grown either on fibre or on the tree and takes hardly any room. Its flowers are *Cattleya* purple with rich purple lip produced singly.

Miltonias are remarkably easy. The Brazilian species such as *M. spectabilis* quickly attaches itself to branches, growing in random directions so that it assumes a pincushion aspect. It produces numerous leads each with one or two single flowered inflorescences. The rose pink flowers are long lasting and charming. Remember that this orchid develops a yellow colour before flowering. The pseudo-bulbs become corn coloured, the leaves a peculiar yellow green. When it is realised the effect is quite normal it makes an attractive variation to the usual rich green of most other orchids. *Miltonia Moreliana*, often considered a variety of the above, is a "conversation piece." It develops the yellowish colour even more than the preceding, while the flowers, of a serious vinous purple with a paler burgundy lip, have the aspect of an affluent, pompous, lone and severe elderly lady making her entrée at a dignified official ball who has descended from her carriage, not a car. It is easy to grow and takes outdoor conditions readily either on a block of treefern fibre or attached to a branch of the tree.

Many *Miltonia* hybrids of the Brazilian types grow easily, they have been raised in Honolulu. *Miltonia Goodale Moir* and *M. Purple Queen* are examples.

The *vexillaria* type hybrids are more difficult, but probably not much more. They like more shade than the Brazilian members of the genus. Try them attached to a small open tree-fern block that can be watered daily yet never becomes waterlogged. A piece about 4in. x 2in. x ½in. will do. The roots will fill the interstices of the fibre only if they encounter no soggy conditions. These lovely orchids, long considered fussy and capricious, will grow remarkably easily when so treated. There are innumerable hybrids all derived from *Miltonia vexillaria*, *M. Roezlii* and *M. Endresii*. All these species are lovely, their hybrids are of many colours and delightful form. They are easily raised and can be purchased quite reasonably.

Maxillaria Sanderiana, like a shapely *Lycaste Skinnerii*, grows freely on a fibre block in the shade of the tree, a fine orchid.

Masdevallia Veitchiana is a real surprise. Only by my being abroad was the plant exposed to full winter sun when the Frangipanni lost its leaves in June. Although I did not have a chance of observing the plant before August, it had withstood the full sun quite effectively, looking fit and well. It took full sun till November when the leaves reappeared. Although this alpine orchid is remarkably robust it has never flowered. One day I may try it overnight in the refrigerator, for it regularly faces low temperatures in Peru. It looks so well in leaf one is reluctant to disturb it.

Odontoglossums are, for a considerable part, quite easy to grow. *O. grande* needs no introduction. In a basket suspended from the tree it escapes snails, its worst enemy. It flowers readily and grows quickly in normal Cymbidium mixture. Related species such as *O. Insleayi*, *O. Williamsianum* and *O. Schlieperianum* are equally readily grown in similar conditions. *Odontoglossum pulchellum* is quite easily grown either on a block or attached to a tree. Its grass-like foliage is graceful and its pretty little white flowers, curiously inverted, with the yellow marked lip uppermost, are very distinct. Hardly any orchid can be easier to grow. *O. Rossii* and *O. Cervantesii* from Mexico are related and make a beautiful display if grown on fibre blocks and treated to gentle outdoor conditions. They do not need the vigorous conditions of *O. pendulum* but, if pro-

tected from gales and scorching sun, will reward the grower with charming, shapely, long-lasting flowers. These two plants are too good to miss. No orchid can take more rigorous conditions than *O. pendulum*. Its flowers are shapely and of crystalline beauty with a pleasant lemon perfume; hence its synonymous name *O. citrosimum*.

The *Oncidiums* have several times been recommended for outdoor culture in this Review. No genus is so rewarding in display, ease of culture and sheer charm. *O. flexuosum* may be the easiest to grow, it will succeed anywhere, to produce hundreds of little yellow flowers in spring and summer. *O. varicosum* is possibly the best of all orchids for producing a spectacular display on a wall or in a tree. On the latter it sometimes develops an impish habit of growing upside down or sideways with its roots running for yards. Its yard or more long inflorescence of shimmering golden durable flowers is breathtaking. They withstand wind and rain without a blemish. It flowers in autumn, about Easter, but lasts right into winter.

Almost any *Oncidium* from Mexico or Brazil will succeed. Be sure to include *O. tigrinum*, *O. crispum*, *O. Forbesii*, *O. concolor*, *O. Marshallianum*, *O. Gardneri*, which will provide a display from late spring through to winter. All respond to branch or block culture and all require minimum of 50 per cent sunlight. *O. cheiroporum* is a wonderful miniature. Although its flowers are only a half inch across, on rather short nine-inch spikes—for most *Oncidiums* have long spikes—it produces a brilliant display in midwinter. The plant merely shimmers in winter winds so beautifully is it designed to withstand violent movement, for it chooses open rocks on sheer mountain faces on which to grow in Central and South America. It quickly produces a tight round tuft that is attractive even without flowers.

Sobralias should be grown in the garden around the tree or near the wall. They like rich open sandy soil and grow easily as an Iris. Their huge shapely flowers last one or two days only, but during summer a large plant is almost always displaying some of its delicately lovely flowers. *S. macrantha* is rich purple in colour, *S. leucoxantha* yellow with paler markings on the lip, *S. xantholeuca* pure white with a rich yellow throat.



ODONTOGLOSSUM PENDULUM

One of the easiest orchids to grow under outdoor culture. Although reputedly difficult to flower, it never fails if grown in full sun. Native of Mexico.



ODONTOGLOSSUM CERVANTESII

This attractive *Odontoglossum* grows freely on a fibre block hung on a suitable tree, such as a Frangipanni. Native of Mexico.



EPICATTCLEYA ELENA CASTANEDA

A hybrid between *Cattleya citrina* and *Epidendrum Mariae*. The hybrid as well as the two species grow outdoors. The flowers are pendulous and intermediate between the two species.



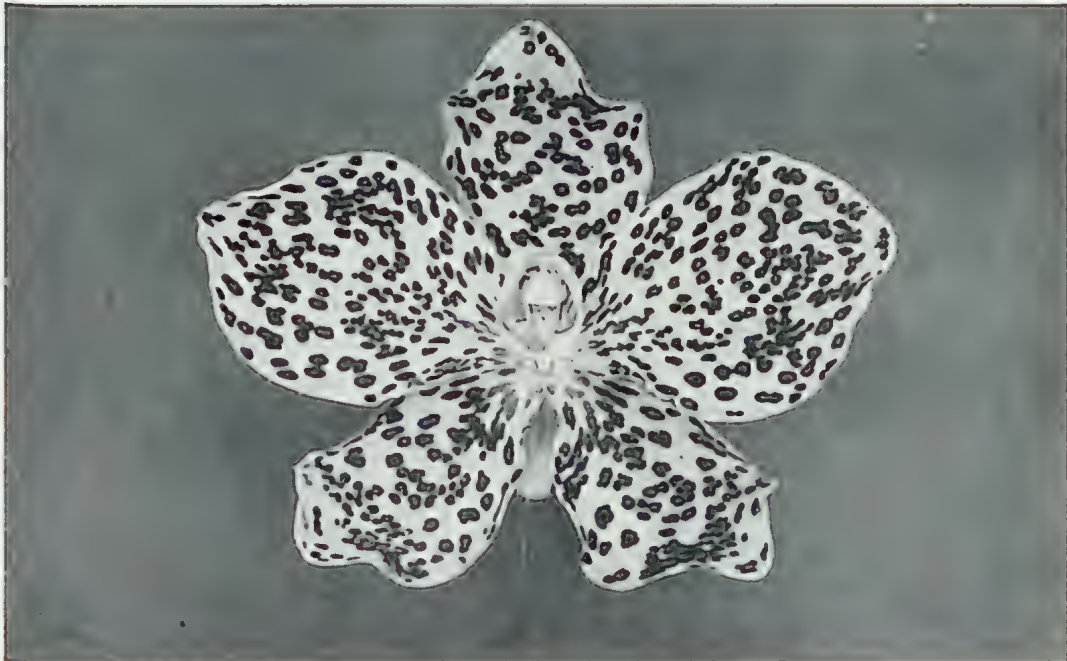
CATTLEYA LODDIGESII

An easy plant to grow outdoors. It flowers several times each year as the new growths mature. Native of Brazil.



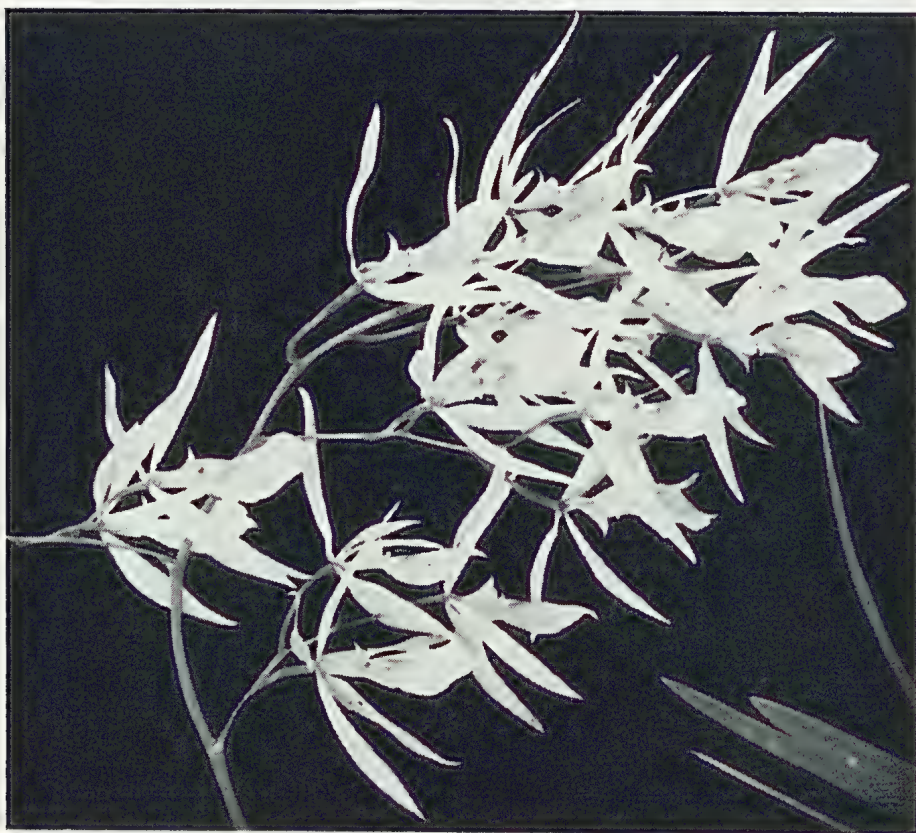
ONCIDIUM VERICOSUM

An ideal Orchid for outdoor conditions.



GRAMMATOPHYLLUM PAPUARUM

One flower from an eight foot inflorescence. They are heavily spotted with blood red on a chatreuse-green ground. The Grammatophyllum and Cymbidium are related. Intgeneric crosses may be possible. They would grow in more tropical conditions and would have much longer spikes of flowers than Cymbidiums. This could be the key to giant Cymbidiums.



EPIDENDRUM NEMORALE

A lovely rose coloured Epidendrum to which reference is made in two articles. Grows freely outdoors. Native of Mexico.



BULBOPHYLLUM BARBIGERRUM

This African species produces flowers that move in the slightest breeze, as if alive. Notice the flies attracted to the flower just opened. Grown on fibre block or attached to branch of tree. Native of Ghana.

Sophranitis grandiflora is a must. It was pictured in the December issue and grows as easily on a half-inch thick treefern block as any of the orchids previously mentioned. It is a brave little plant bringing warmth and charm to mid-winter and early spring days.

Vandas are not really difficult. This I found on "tossing out" a poor shaped flower specimen of a strap leaf Vanda onto the tree. It grew several feet without losing a leaf, while its thick fleshy roots wandered several yards. Later numerous *Vandas* have been tried. They take longer to harden than some orchids, but most seem to grow well in the end. The blue *coerulea* hybrids like *V. Wettsteinii*, *V. Gilbert Triboulet* and *V. amoena* are very easy.

Vanda coerulea is a cool growing orchid. Even the latter species, which is notoriously difficult, has grown reasonably well. Its roots have grown many feet long, but its leaves still develop a die back. Fortunately its hybrids seem to be immune from this fault.

So you see, these are only the orchids I have tried. It would seem that there are hundreds of other attractive species and hybrids which will grow equally easily.

The charm of growing plants on trees is that they are "uncaged". They develop a beauty of vegetative growth one never suspects from potted plants. They can be balanced between tall erect species, little clumps, grass-like plants, pendulous species.

Landscaping the orchids is delightful. They can be arranged among gaudy Bromeliads and

Zygocacti with futuristic abandon and with an artistic balance that needs to be tried in order to sharpen and develop that artistic touch, latent in many of us.

Imagine what you can do with four feet long sprays of *Oncidiums*, pincushion-like *Miltonia spectabilis*, impressive, erect *Vandas*, Bromeliads perched here and there with their staggering inflorescences, hanging Zygocacti, orchids like *Epidendrum falcatum* that grow down the tree and others like *Epidendrum Loegrenii* that hang like a sloth, *Cattleya citrina* that looks like a tulip upside down—can't you imagine that we may soon have an understandable meaning to "Treescaping" and "Wallscaping" as well as to landscaping.

Finally, a guide on fertilisers. A useful rule is, the more light intensity any plant encounters, the higher its nitrogen requirements. A weekly hose with dilute Aquasol, for which a proportionator hose attachment is highly useful, is necessary. To supplement the nitrogen about half the amount of Urea may be added to the Aquasol. Regular but dilute fertiliser is recommended, not occasional and strong; or woe betide those young roots. A teaspoonful of fertiliser to 2 gallons of water is adequate, with a proportionator a tablespoonful to 2 gallons, to allow for the dilution on mixing at the nozzle. The plants are watered each morning with a suitable gentle spray such as a Pope Oblong Rose nozzle.

5 Oyama Avenue, Manly, N.S.W.

IN MEMORIAM: R. J. CASAMAJOR

—We have learnt with deep regret of the passing beyond of Robert Casamajor in the latter part of February after a serious illness.

He was a distinguished and distinctive figure in so many activities of the orchid world.

His prolonged study and profound knowledge of orchids made him an ideal Editor of the *Cymbidium Society News*, in which capacity he is most widely known overseas. Bob's personality pervades its very pages.

Gifted with a penetrating analytical provocative mind he expressed himself with equal facility and success as a writer and much sought speaker.

The long unselfish service he gave to orchid

and horticultural societies in which he held many presidential positions, and was noted as an eminent and pungent judge, brought him many honours and recognitions.

The grand pattern of his contributions and achievements will be a permanent memorial to his greatness in the orchid world. We would like to join his many friends in U.S.A. in the lament for the profound loss sustained, and express our most sincere sympathy to his relatives.

Expressed in epitaph form it may truly be said of Bob:

"He set the cause above renown
He loved the game above the prize."

—J.H.B.

Bifrenaria Harrisoniae

J. N. RENTOUL

• A recent visitor to Australia was the President of the Penang Orchid Society, Ng Peng-Wah, a Malayan gentleman attached to the entourage of the Malayan Prime Minister. It is fairly safe to say that the most enjoyable part of Mr. Peng-Wah's visit to Melbourne was the tour of the orchid-growers which Mr. McGraith, Victorian Orchid Society President, undertook with him.

Though time was necessarily short at each place, it was possible to put a few questions to Mr. Peng-Wah on what they grow and do in Penang. Usually they concentrate on Vandas, Dendrobiums and such other tropical orchids as Phalaenopsis and Cattleyas. Their meetings are conducted in the English language entirely. Occasionally there must be lapses, and these have, no doubt, their amusing moments.

Orchids are known to the Malayan natives and other inhabitants not by family names as we know them—in fact, they are not regarded as being families at all. Each has its separate name, usually local, and though there may be three or four Dendrobiums in the one district they each have a separate name with no horticultural linkage at all. A little thought will allay the feelings of strangeness in the idea when we remember that we seldom allude to our natives by their proper names when we talk of them. There is the rock lily and the thumb-nail orchid and all the others, so there is not really all that much difference between us.

Two orchids that attracted Mr. Peng-Wah in Melbourne were a large pure white *Odontoglossum* with a raceme of 14 flowers and *Bifrenaria Harrisoniae*. It was quite obvious that he almost would come to Melbourne to live just to be able to own an *Odontoglossum* like that. He asked that his photograph be taken with the *Odontoglossum* clasped firmly in front of his chest. No doubt he will be very proud of that picture.

Bifrenaria Harrisoniae attracted him as much, and though he knew that an *Odontoglossum* would be hopeless in Penang he was gratified when presented with a piece of *Bifrenaria Harrisoniae* to take home with him. There is little doubt that it should thrive in Penang, because this orchid, a native of South America, will grow well in either Melbourne

or Sydney over a fairly wide range of conditions.

What intrigued Mr. Peng-Wah was the delightful perfume of *Bifrenaria Harrisoniae*. But what intrigued Mr. McGraith and me was that to get the perfume Mr. Peng-Wah did not smell the flower. He took a petal between finger and thumb and then took the scent to his nose on them. He did it also with *Dendrobium superbum*. Not our way; we take a good sniff, insects and all.

Bifrenaria Harrisoniae is one of the few orchids that have no record of breeding in Sanders Hybrid List, which is rather strange, as there are several species and it is natural to suppose that they would also have an affinity with some other South American orchids in the same way that *Laelias*, *Cattleyas* and *Brassavolas* have. Also strange is that so few people grow it. They have at times in their collections hybrid orchids that are much inferior to it as orchids.

The thick fleshy cream flowers resemble *Cymbidiums*, the purple hirsute labellum encouraging more than one grower to try to cross it into that family. It flowers in October-November just as the *Cymbidiums* are going out of flower, and lasts in good condition for weeks if kept cool and dry. Other members of the family are rather bizarre in colour, but the three-inch flowers of *Harrisoniae* are probably the only ones we are likely to see in Australia.

No doubt when Mr. Peng-Wah gets his plant going there will be no shortage of applicants for a piece of it. But when we call him Mr. Peng-Wah we mutilate his name, because that is equivalent to calling Mr. Slattery "Mr. Frank". The surname is "Ng". But just how to pronounce it I forgot to ask.

24 Denman Ave., Glen Iris, Vic.

WORTH OBSERVING

• Many people find the words genus and genera confusing, with the result that they are often used wrongly.

Genus is the singular and genera the plural, one of the not-so-common Latin plural forms.

Thus we can say that all the *Cymbidiums* belong to one genus, all the *Cattleyas* belong to another genus and many orchid growers cultivate these two genera.

New Sanders Hybrid List

J. N. RENTOUL

• A very important orchid publication is now in the throes of birth. Perhaps we should say rebirth, because it is a continuation of the Sanders Hybrid List from 1945 to 1959.

First let me quote from the 1946 Edition the words of Fred K. Sanders: "... With this in mind I have revised and prepared the mammoth lists of Orchid Hybrids for publication in one consecutive work. Thereby the search for parentage and names of all known hybrids will become sixfold simplified. It is my belief that I shall earn the gratitude of all who are or will be interested in orchids for the very considerable time and thought I have devoted to this revision and amalgamation of the many lists of hybrids our firm has hitherto published."

There is no doubt of the gratitude any thinking orchid grower will render to the writer's memory, and now the tradition is being carried a step further by David Sander in a new and concise form of extension of the original 1946 List.

In the new list the work has been divided into sections: (I) Cattleyas and Allied Genera; (II) Cymbidiums; (III) Cypripediums; (IV) Odontoglossums and Allied Genera; (V) Vandas and Allied Genera, with Phalaenopsis, etc.; (VI) All Other Hybrids.

Each of these sections can be purchased separately and are in loose-leaf form so that they may be added to in future years, and though the cost to purchasers is at present unknown, the approximate quotation is very reasonable. The complete 1946 list is still available at six guineas sterling, and the new work is quoted at approximately £3/3/0. It may seem economy at first glance to purchase only that list interesting at the moment, but there is no saying that any of us will retain our fondness for any particular family of orchids. The plan at present is to add to this new list at intervals at a moderate cost.

It may not seem important to some growers to know where their plants derived their colour and shape and other good qualities; time will reveal the short-sightedness of that view. It is important when we wish to purchase others as good—and how easy to get some idea if we have a reference to turn to. It is possible that a majority of the crosses listed in the original

work are no longer cultivated, and yet their colour or shape inheritance keeps cropping up time and again in our new flowers.

It is fitting that this work should continue in the name of Sanders, and no doubt time will render to David Sander the same gratitude we feel to Fred K. Sander for his perseverance and industry. There cannot be any financial reward in this type of work—rather it is a dead loss; but to ensure its success and continuance all thinking orchid growers will realise that it is only by their support that it is made possible. For further information or to order copies write to David Sanders' Orchids Ltd., Selsfield, East Grinstead, Sussex, England, immediately.

24 Denman Ave. Glen Iris Vic.

A NEW ORCHID MANUAL

• Attention has been drawn to a new manual of cultivated orchids according to news published in the *English Orchid Review*, Vol. 67, No. 788. It states:

A Manual of Cultivated Orchids. In Dr. Holtum's article on the perplexing Vanda—Vandanthe question in the November issue of *The Orchid Review* he stated that "Schlechter's book, *Die Orchideen*, is still the most comprehensive single work on the orchids of the whole world, unfortunately it has never been translated into English . . ."

Readers will be interested to know that Mr. Alex D. Hawkes, Editor of *The Orchid Journal* and *The Orchid Weekly*, has translated the bulk of Schlechter's volume into English and has incorporated it as a basis for a two-volume "Manual of Cultivated Orchids," which will be published during 1959 by the Ronald Press—Chronica Botanica Co. Orchid growers throughout the world will owe Mr. Hawkes a great debt for this valuable translation.

Dendrobium Fusiforme and Variety

K. WADSWORTH

• On the windswept mountain crests at an elevation of some 4,000 feet, on the Evelyn Tableland of North Queensland, there grow in abundance two very fine orchids.

Dendrobium fusiforme and its variety *Magnifica*, not to be compared with the *fusiforme* that inhabits coastal areas, the flowers of the coastal type being much inferior. The flowers of the plants from the higher altitudes are quite larger and of better quality. The variety *Magnifica* is an albino, lacking the purple stripes on the labellum of the type form. It can only be distinguished from the type form when in flower. They both grow on the same trees and are often so close together with their roots intertwined that it is hard to distinguish whether it is just one plant or two. They are lovers of wind, sun and rain—120 inches per year; but not necessarily great heat, rarely does the temperature rise above 80°. Even though their habitat is 18° latitude, the altitude has a tempering effect on the heat. Humidity, however, is always high.

The plants grow to huge size, as many as two hundred bulbs on a well-grown specimen, the bulbs being some two feet in length and two inches in thickness. On the other hand, a plant that may be growing under hard conditions may reach flowering size when the bulbs are about three inches in length.

IN MEMORIAM: W. ROTHWELL

• It is with deep regret we learn of the passing of the late "Wally" Rothwell, late of Bee-croft and Forster, N.S.W.

A former president of O.S.N.S.W., which office he filled with dignity and wisdom. One of the first orchid enthusiasts in Sydney his advice was always available to new growers. He will be remembered as being one of the earliest exhibitors who gained an award, notably *Cymbidium Shirley* v. Her Majesty, *Swallow* v. Conquest, *Cyzara* v. Remembrance, and many others.

Of recent years he has resided at Forster and was a leading member in the local society, who, no doubt, will miss his wise counsel.

—L.G.

Its favourite growing place is on the branches of some forest giant that has long since died, but is still standing, enabling the plant to receive maximum sunlight.

Their root system must be one of the strongest of all orchids. It is literally a network of living steel cables. A comparatively small plant can take the weight of a man quite easily. The winds blow very strongly on these mountain crests, and every now and then the inevitable cyclone comes along. But no cyclone would ever shake *D. fusiforme* from its anchorage.

October is their flowering season, coinciding with the only month in which rain does not fall. They have a strong but not unpleasant perfume, very noticeable on a fine sunny day.

D. fusiforme also grows naturally on rock faces, but the plants never attain the size that the tree-dwellers do, nor is the inflorescence as good. The sight of a very large plant in flower is something to remember.

Millaa Millaa, North Qld.

• **FRONT COVER: ANGRAECUM SESQUIPEDALE.** This is the largest species of the entire genus, it has six inch flowers with a remarkable spur about eighteen inches long; hence the name *sesquipedale*, meaning "a foot and a half."

The large spur enabled Charles Darwin in 1862 to predict that a moth would be discovered which would have a proboscis long enough to reach the nectar at the base of the flower and which would also be the pollinating agent for the *Angraecum*.

Thirteen years later Rothschild and Jordan found a Hawk Moth with a proboscis 22½ centimetres long which was named *Xanthopan Morgani praedicta*; this is the insect which pollinates *Angraecum sesquipedale* in Nature.

The beautiful plant flowers in August; it makes a good display with its waxy white flowers which are attractively perfumed; it lasts in perfection about a month.

It requires the protection of a glasshouse, otherwise it is easily cultivated along with strap leaf Vandas, which it resembles in its vegetative structure.—G.H.S.

Starting a Collection—Suitable Plants for South East Queensland

A Talk given to the Queensland Orchid Society
by Mr. A. W. F. Kurth on the 11th April, 1958.

• How does one start an orchid collection? In my own case it was simple. A gift of a plant of *Dendrobium phalaenopsis*. My parents, being country people and plant lovers, had a bush house. On one of the three by two uprights I tied this orchid. Much to my delight, the plant, apparently finding itself in congenial surroundings, prospered. As a matter of fact, it grew so well that this led me to make further enquiries regarding the growing of orchids; the opinion of those I spoke to was that the only way to grow orchids was by pot culture. I planted this orchid in a pot, whereupon the plant commenced to decline. Whether this was due to the fact that I had used soil as compost or that the time was not right for the repotting of this type of orchid, I did not know at the time. However, the decline of the plant was so noticeable, I promptly tied it back on to the hardwood upright in the bush house; now, after more than twenty-six years, the plant is still in my possession and growing well.

In one of the great natural divisions of the vegetable kingdom, the Monocotyledons, no order is more interesting than Orchidaceae. It does not possess great economic value such as attached to the cereals or the palms for, excepting *Vanilla*, the order contributes scarcely anything to foods, fibres or drugs. But by the beauty, grace, wonderful colouring and marvellous form or quaint habit of its many members, it appeals to almost every horticulturist, and is represented in nearly every plant collection in the land. The elevation above sea level at which plants grow has a great deal to do with their habit. If it is known at what altitude a certain plant is found growing in a particular part of the world, an idea, though not a strictly reliable one, can be formed of its requirements. The greater the altitude the cooler and drier the atmosphere becomes. It is now generally recognised amongst experienced cultivators that it is not necessary to have a separate division or house for each section of orchids, but where a large number of some particular species is grown cultural requirements are more readily met when the plants are placed in a structure by themselves. Those possessing only an ordinary bush house need not despair

of being able to grow orchids, as in some portion of the house conditions almost identical with those here advised can be given.

Angraecums, *Aerides*, *Saccolabiums* and *Phaius* should occupy the shadiest part of the house, in fact, none of them should be exposed to strong sunshine at any time.

Cypripediums, as a whole, are amongst the easiest of the orchids to cultivate. The most popular of the warm growing kinds are *C. bellatulum*, *barbatum*, *Curtisii*, *Harrisianum*, *niveum* and *concolor*.

Dendrobiums. This very large genus forms one of the most generally useful group plants we have. All are epiphytes. The growths may be slender, tall and stout, club shaped, hairy, pseudo-bulbous or rounded and flattened, some are quite deciduous and others are perfectly evergreen; the former usually having thin leaves as compared with the tough ones of the latter. In inflorescence there is great variety; many produce blooms all along the growths of the preceding year and others have pendulous many-flowered racemes. The flowers themselves vary largely, from the long spurred, tiny flowered species of purely botanical interest, to the large spreading blooms of *D. phalaenopsis*. The colour range is from pure white through varying shades of yellow, rose, lilac to crimson purple.

Few, if any, orchids are handsomer than the beautiful *Cattleyas* and *Laelias*. Plants of these species may be had in bloom nearly the whole year round, beginning in January, February and March with the numerous varieties of *C. Bowringiana* and *C. labiata*, following which in April are *L. tenebrosa*, June—*C. Mossiae*, July—*C. Trianae*, August—*C. Gaskelliana*, September—*L. anceps*, October—*L. purpurata*, November—*C. Percivaliana*, December—*L. elegans*, so that a well balanced collection of species and hybrids will provide a supply of blooms the year round.

In a cool shady portion of the bush house such stately plants as *Vanda tricolor* and its variety *suavis* may be grown. *Vanda Sander-*

iana will also appreciate a shady portion of the house. After considerable experience of growing this type of orchid, it has been found that whereas strap leaved plants will thrive in partial shade, terete and semi-terete varieties must have the benefit of maximum sunlight at all times.

Phalaenopses are beautiful orchids when well grown. All succeed best when planted in shallow pots or wooden baskets. The following kinds, *P. Schilleriana*, *P. amabilis*, *P. grandiflora* and hybrids should be suspended on the shady side of the house, but at the same time they enjoy a moderate amount of light. *P. Lueddemanniana* prefers a shaded position at all times.

Many anxious growers give their plants too much water after they have been repotted, thinking that by so doing growth and root action will be encouraged; the best and most practical way is to give water very sparingly until young roots are seen pushing their way through the compost, when the quantity should be gradually increased as each plant becomes properly re-established.

Orchids which flower during winter are highly appreciated and perhaps none more so than the deciduous *Calanthes*. The species are characterised by large, broad, many ribbed or plaited leaves, thick fleshy pseudo-bulbs and long spikes of showy flowers, distinguished by the lip being attached to the column. The flowers last for several weeks either on the plant or cut and placed in water.

C. Veitchii, *Victoria Regina*, *rubro-oculata* and *William Murray* are desirable varieties. This seems to be an orchid that has lost favour with orchid growers; no doubt the fact that the

plant has a definite resting period after flowering has led growers to put the plants too far under the bench during the period of dormancy, and then overlooked when new growth commences.

Epidendrums. Most of these plants grow well in pots or a well drained garden bed using as compost equal parts of charcoal, peat and leaf mould; some of the *Epidendrums* are tall growing. The following are the most desirable—*E. cinnabarinum*, dense racemes of bright red flowers; *E. Obrienianum*, a handsome hybrid of strong growth; *E. radicans*, with panicles of bright orange scarlet flowers which open in succession for three or four months. The dwarf *Epidendrums*, such as *E. atropurpureum*, *E. prismatocarpum*, *E. Stamfordianum*, should be placed in shallow pots in the same compost.

Stanhopeas are orchids that must be planted in a basket of peat, otherwise flower spikes which push through the bottom of the basket would not be seen.

Cymbidiums are the problem orchids in this corner of the State; great progress has been made by hybridists in producing bigger and brighter blooms. However, ease of cultivation appears to be one of the desirable features that has been left out in the process.

Lycastes are orchids that may be grown in a compost of equal parts of peat loam and well rotted cow manure. The waxy flowers are most attractive. *Oncidiums* are rather touchy subjects to grow successfully, as they require rather cool growing conditions at all times.

Several other varieties of orchid plants are suitable for local conditions. However, a selection of those mentioned above will form the basis of an interesting collection.

Orchid Atmospherics

J. SHAW

• Many years ago on one of my foraging expeditions I journeyed to the bottom of the canyon which is a gorge many hundreds of feet deep at Springbrook, situated at the southernmost extremity of the McPherson Range on the border between Queensland and N.S.W. On this occasion I was accompanied by Dr. C. P. Ledward, who was then a keen student of our native orchid species.

In the "V" bottom of the gorge we came across quite a large patch of *Sarcochilus Fitzgeraldii*. On one side, gloomy, heavily shaded and watered by drips mainly from overhanging rock, the plants were luxuriant, green and healthy-looking. On the other side, the plants were stunted, sparse and sunburnt. I was there again in the flowering season and learnt a lesson I have always remembered. The lush plants

did not flower, yet the hardened ones were a mass of blooms.

I subsequently described it as an orchid easy to grow and hard to flower, or, if grown hard, flowers profusely (re my notes on the mounting of the genus *Sarcochilus*, A.O.R., June 1940).

This applies to quite a lot of orchids and most notably Cattleyas. Above all, I take it that the main object in growing orchids is to flower the plants.

Your footnote, Mr. Editor, to the "blister culture" photos in my article "Never Repot a Cattleya", A.O.R., March, 1958—"Perhaps southern States may envy the Queensland climatic conditions where this culture takes place in a lath house," inspires me to write this. No one can grow orchids over a period of years without picking up a few pointers. I am speaking mainly of Cattleyas. I have seen a lot of collections in glass houses grown in what I would describe as almost a turkish-bath atmosphere. They grow well, but the percentage of flowers, to me, seems to be lamentably poor, because they are grown too lush. I do get, I think I can say without conceit, a bigger percentage of flowers than most others I have seen. A lath topped glass-walled bush house if properly constructed will grow Cattleyas successfully practically all round our eastern seaboard. Exceptionally cold localities might need a little overhead protection during the winter months.

If I was to place a glass roof over my orchid house I would "cook" my orchids in the summer months. Common sense must again be applied in the building of this and the lessons learned from nature be applied. Any person who has been in a rain forest or vine scrub will note the total absence of wind and how everything struggles to grow up to the light. Our average temperature, if confined, is sufficient to grow most exotics except tropical *Dendrobiums* which, I am convinced, need warmth at all times. Cattleyas are relatively cool growing orchids.

My recommendation is for brick or rock up to 3ft., glass the rest of the way to at least 9ft., and no bottom or side vents whatever. The roof should be perfectly flat so as not to attract wind-dip, and the battens must run opposite the sun's path, i.e., north and south. If possible, the sides should be carried up (not necessarily with glass) at least a foot above the roof. In this way you have confined the naturally warm air which is slowly rising and bathing your hanging plants. Fifty per cent roof light, that is, direct sun irrespective of light through glass

sides, is desirable. I recommend two inch battens, two inches apart—mine are three inch battens, three inches apart. The former would be better, same light but better diffusion. The area should be as large as circumstances permit. A fishpond for humidity is desirable and the plants should be hung not closer than two feet from the roof. I think that following these suggestions you will grow your plants hardy and make them flower. I know that no one can lay down hard and fast rules. I have seen them grown well under most diverse conditions, but I think in this way you are coming as close as artificially is possible to create that warm scrub pocket, natural atmosphere, with perhaps the extra light necessary to induce flowers.

Phalaenopsis do very well for me under these conditions. *P. Schilleriana*, purchased some twenty years ago from John Bisset for 7/6, flowers well every year, last year with two hundred and forty-eight flowers on the plant. *Phal. amabilis* and *Phal. Lueddemanniana* also revel in these conditions. I purchased a *Phal. Chief Awaho* from the Queensland Orchid Society and placed it alongside the others, In a week the sun had burnt practically all the leaf off it and I thought I had lost it. It soon recovered, however, and now is very vigorous and flowers well. Northern *Dendrobiums* have not done well for me, but since reading Dr. J. A. Vote's sound commonsense article "*D. Phalaenopsis* and its Hybrids", A.O.R., June 1956, and reverting to very small pots, paying particular attention to watering, I appear to be achieving some moderate success. *Vandas* also do well for me.

I shall conclude with the hope that these ramblings may help in guiding our young and inexperienced enthusiasts towards the ultimate flowering of their plants.

—"Iluka", Goodwin Terrace,
Burleigh Heads, Qld.

BEAT THIS

• *DENDROBIUM VERATRIFOLIUM* grown by Mr. P. K. Searle. This plant won the Popular Vote at the Queensland Orchid Society's meetings in both November and December 1959, and the owner was awarded a Certificate of Cultural Commendation at the December meeting. The plant is some 4 ft. high and carried 15 spikes with an average of 30 blooms per spike. A native of New Guinea coastal areas, this is an attractive *Dendrobe* with white antelope type flowers prettily marked with lavender in the lip.

Housing

A Talk Delivered to the Queensland Orchid Society by President, E. A. Knoblauch

• Before acquiring a collection of Orchid plants, one should give careful consideration as to how and where they are going to be housed.

We no doubt have many places framed in our mind, whether they be good, bad or otherwise, as to where their permanent abode will be.

Whilst we may be successful in obtaining satisfactory results by attaching our Dendrobates to the trees about the grounds and placing the pots containing the Cymbidiums in the semi-shade of a tree, or hanging the Cattleyas and some of the other genera to the roof battens of that tumbling-down fern house, we no doubt will get decidedly better results if we house the plants in a position where they will not be subject to the ravages of insects and the violence of the four winds.

The better the housing conditions and the control over the elements—that is, the amount of moisture, light, air and heat—the better will be the results we achieve.

A common error made by many when starting a collection is to arrange the plants on a wooden bench under a dwelling house verandah. Here we find that the plants are subjected to rather draughty conditions and snails, slugs and other pests, cats, etc., soon find the plants, and occasionally the children find them also.

Whilst the plants generally require movement, and plenty of fresh air about them, draughty conditions are not always conducive to good growth. To overcome the draught problem you can glaze in a section, but we still have another problem to get over; the plants will always grow their new leads in the direction of the strongest light, and subsequently will in a very short time of having made a new growth be growing at right angles to the pot.

A house arranged under a verandah or constructed against an existing building is poor practice under most circumstances. If you have to erect your house against an existing building, endeavour to have it face north, for in this position only can the longest period of daylight be obtained, which is necessary for strong and healthy growth.

The best situation is right out in the open and away from all obstructions, then only will the maximum amount of light reach the plants.

The type of house required, generally speak-

ing, is governed somewhat by the class of plant you wish to grow. If it be terete Vandas you don't require a house at all, as they grow best when tied to stakes and situated in the open sunlight. On the other hand, semi-terete types and strap leaf types do well under cover of a very modest kind of structure, such as a battened house of two sides, back and roof. Close boarding of the walls to a height of about three feet up from the ground, and the roof battens spaced about two inches apart, will afford sufficient protection.

Suitable benches can be made from pieces of 3 x 2 rough sawn hardwood and resting on building bricks. Other kinds of orchids can be cultivated within the surrounds of a structure of this nature, particularly if one goes to the trouble of adding a front of similar construction and making a door in the east end and covering the entire structure with galvanised gauze so as to keep out those insects that are likely to pollinate the plants and the ones that devour the foliage, etc.

Why the door in the east end of the house? Cold westerly winds cannot enter when you open the door at this position. We could arrange for a door to face the north, but this position is at a disadvantage when spraying becomes necessary with strong solutions of insecticide.

All orchid houses could for many reasons be of rectangular construction and fitted with the door in the east end for preference; when using pesticide of a dangerous nature, the hazard is eliminated if the door is opened and the ventilators at the other end also opened, and with a movement of air in the direction of the ventilators spraying can safely be carried out by starting at the farthest end and moving back to the door.

If the entrance is in the centre of one of the long sides, it is almost impossible to spray the entire house at the one time and not come in contact with the fumes liberated from the material being used.

So far we have only dealt with the simpler and cheaper forms of housing, but quite good results can be obtained from these methods. More elaborate types of housing can be used. So far I have made no reference to the size of house; this, from my own experience, I

consider is a matter of extreme importance. It is a good plan to construct the house not less than twice the size that you think you will need, for this, even then if you are really interested, in a year or two will be too small.

The better the housing from the beginning the greater the dividend you will receive in the long run. Only too often do we find good valuable plants give up the struggle for existence due to bad housing conditions.

A house that is intended to last for a long period should have the foundations and walls built of brick, concrete or breeze blocks, or some other substantial material. Fibro-cement double sheeted walls are also suitable. Three feet from ground level is a suitable height for the foundation walls. From this level to the eaves the walls will need to be of glass, either single or double glazed. The height can be made proportionate to the size of the house.

If heating or air conditioning is to be considered, the house should be sufficiently high to allow for rapid and even circulation of the air and accommodation of the fluming. The roof can also be of glass, double glassed if possible, so as to maintain a more even temperature.

A span roof with gable ends has an advantage over a flat roof, insofar as the heat generated by the sun's rays can be induced to escape more readily through the ventilators above the eaves level in the end walls.

Where air conditioning is not employed, several windows are very necessary, and should open inwards; the openings must be covered with fine wire gauze.

Ventilators that can be operated at will to suit varying weather conditions will be found essential at ground level, and also will want covering with gauze.

Benches to accommodate the plants could be best supplied made from heavy gauge galvanised square meshed wire, meshes about three-quarters of an inch square. They should be movable and placed on brick, concrete or earthenware pipe pillars, at a height for a comfortable working position. Wire benches tend to allow for better air circulation and help to even out the temperature of the house.

The position your plants will occupy in the house will depend largely on the type of Orchid you wish to grow.

If you are contemplating artificial heating and air conditioning for a future time, make the necessary provision for ducts and fluming at the time of building.

Orchids, Anyone?

LILLIAN W. RANDOLPH

Article appearing on page 17 of the January 1960 issue of *The Orchid Digest* (California).

• Orchid raising is the one hobby that can be all things to all people.

You are a gardener at heart? Joy is in the new green shoot, the long hoped for sheath for you.

You are a scientist—a student, there is the whole field of breeding and genetics; perhaps research that will expedite flasking time.

Or, are you the artistic type? For you the flower arrangements, corsages and, sooner or later, wedding bouquets and club programmes (Women's Clubs, Garden Clubs and, of course, Orchid Clubs).

Competition is the spice of your life. Then, by all means, go in for show plants—you'll have plenty of competition from experts.

You are rich? Then you can pay a couple of thousand for one rare plant.

You are poor? The easy to grow and flower varieties will soon give you trading stock to improve your collection.

Your main interest is your housewifely chores? Why not grow your own party centre-pieces?

But you are a traveller? For you—first, an automatically controlled house (or an orchid sitter), then take your A.O.S. membership book and drop in on some of your fellow members across the country; your letter of introduction is in its pages. You are more adventure-some? There are always orchid hunting expeditions to Mexico, Central or South America.

Or you want to stay home and be the organisation type. A few plants on the kitchen sink will make you eligible to a whole new world of committees, board of directors, to say nothing of a judge of your fellow members' accomplishments. Of course, by this time your vocabulary has increased 200 per cent and you have stopped spending money on executive lunches. (New glass house takes all your spending money.)

You can speculate, pollinate, procrastinate (while the scale takes over the greenhouse). You can associate, activate, operate and officiate, but, believe me, you will never be bored again.

726 Magnolia, Bakersfield, California.

Orchid Notes From Tasmania

F. W. CHILVERS

• Tasmanian orchid growers have experienced one of the hottest and driest seasons on record for many years, so warm in fact that those stately trees of *Eucalyptus Ficifolia*, have made a beautiful display this year, even the *Jacaranda* and *Erythrina* (Coral trees) have shown flowers, which is rather rare in the south part of this State. In consequence, it will be most interesting to see what effect it will have on the flowering of orchids generally, particularly with *Cymbidiums*, *Dendrobiums*, *Oncidiums*, etc.

March and April is a most important period, as every advantage should be taken to give the maturing bulbs of the above genera more sunlight with a gradual thinning of shading on the roof glass, if this has been put on very heavily.

Dendrobiums and *Oncidiums* benefit considerably if the plants are hung closer to the roof glass to thoroughly ripen the pseudo-bulbs. This applies particularly to *Dendrobium nobile* varieties which, in their natural habitat, grow profusely during the rainy season and thoroughly ripen during the dry period that follows. The completion of the leaves at the apex of the new bulb gives an indication when it has reached its maximum development and "ripening off" can take place. Watering also can be reduced during this period until the swollen areas are noted at the point of each section of the bulb, where the flower buds are starting to push through. Normal watering should then be resumed.

Continued from page 17

unsurpassed by any other flower. They last from four to six weeks and even longer, they will hold their full beauty most of that time. What looks nicer than a group of twelve or more *Cypripediums* in flower together on a show bench? If you have been toying with the idea of growing slippers you will find that, given the conditions set out here, they are among the easiest of all orchids to grow.

Perhaps I have ignited a spark of interest in your mind and if so this article has not been in vain.

21 Garden St., Maroubra, N.S.W.

Oncidiums which have failed to flower should also be ripened off in this manner and can be dried out until severe shrivelling takes place. This often will induce flower spikes.

Coelogyne cristata is another species which should be treated in this manner without harmful results to the plant.

It is not advisable to dry out any plant that is sick or lacking in root formation.

Cymbidiums at this period should have made vigorous growth through the summer. Damping down on warm days should still be continued and a slight mist spray overhead is also beneficial. Plants should not be allowed to dry out where bulbs are maturing, but the gradual process of giving strong plants more light is a means of hardening the pseudo-bulbs and giving texture to the foliage. This hardening of the plants helps considerably during the long cold and sunless days of winter as cold and disease generally attack weak plants with soft bulbs and soft growth.

Many varieties of *Cypripediums* will be showing flowers and others making vigorous growth. Moist conditions should still be continued and a mist spray overhead is beneficial on warm days. Water should not be allowed to collect in the axils of the leaves or damping off will occur. These plants should still be kept in a shady section of the glass house. Varieties of *Miltonia Odontoglossum*, *Masdevallias*, should also be kept in a semi-shaded area.

Many growers in Tasmania have flowered *Cattleyas* and *Laelia Cattleyas* very well this season in cold glass houses. This is perhaps an indication of what a nice warm summer can do to assist the grower of these lovely plants. We all hope they will become more popular because of this.

It is essential for all growers of *Cattleyas* and allied varieties who grow these plants in cold conditions to endeavour to harden the pseudo-bulbs and leaves before the dull winter days set in. Plants should be given as much light and sun as possible during the next three months to achieve this end. A slight yellowing of the leaves is not harmful if the plant is strong and vigorous.

1 Lassuade Ave., Sandy Bay, Tas.

Non-Orchidaceous Epiphytes

BROMELIADS

YORK MEREDITH

• In the jungles, rain forests and rocky mountains of the Western Hemisphere where many of our most popular orchid species grow, we find interesting companion plants growing upon the same trees and rocks. These are the Bromeliads (plants of the pineapple family).

The cultural requirements are therefore very similar to those of the orchids.

Bromeliads form a rosette of leaves which usually are leathery and sometimes have most attractive markings or are strikingly variegated. They usually have showy flowers when they reach maturity. Some have erect inflorescences while others have their flowers hidden in the rosette but these are frequently ornamented with highly coloured bracts. The fruits are sometimes brightly coloured and long lasting. Although these plants are so attractive, their cultural requirements are extremely easy. Being epiphytes they can be grown like our orchids in sphagnum moss or *Osmunda* fibre. They can be planted in small containers or grown as epiphytes on pieces of driftwood or fern fibre slabs. Their root system is largely designed to attach themselves to rocks or trees. Nature has cleverly formed the rosette into a funnel shaped reservoir which will hold water and plant foods. It is not recommended to feed Bromeliads with strong solutions for this very reason. As the salts and chemicals can easily damage the leaves in the rosette and thus the plant could die. The usual amount of chemical fertilizer is one oz. in 15 gallons of water. The light requirement especially for variegated Bromeliads must be carefully watched as they are very susceptible to burning. Many of them grow in shady situations and are not always exposed to full sunlight. They therefore should be grown under the shadiest side of the bush or glass house. Many of the green leaf varieties will take quite bright light some even growing in full sunlight.

The insect problem with these plants is not very pronounced. However, they may develop scale insects or mealy bug which may be controlled with a spray of Trithion or Malathion.

Among the most popular varieties grown are the *Vriesias*. *Vriesia hieroglyphica*, a native of Brazil, is a splendid variegated plant which is about in Australian collections. It is an extremely easy species to grow. The leaves are beautifully marbled with dark green and yel-

low green, the underside being a purplish brown.

Vriesia splendens, native of British Guiana, is a little tender when small, but becomes hardy when two or three years old. The leaves are blueish green with broad purplish cross bands, greyish green underneath with bold purple bands. The flowers are striking, sword like in shape, reddish with copper tinging.

Guzmania musaica is another attractive showy leaved form from Colombia. It grows in the typical rosette with broad green leaves marked with many waved lines of dark brown bands. The underside is purplish with much darker lines.

Cryptanthus fosterianus, *Cryptanthus zonatus zebrinus* and *Bromeliodes tricolor* are among the most sought after of the *Cryptanthus* group. These do not grow in the typical deep rosette form like *Vriesias*. They are much flatter and spreading. Their leaves are extremely beautiful, especially *Zonatus zebrinus* and *fosterianus*. They are banded with bronze, purple and silverish beige cross markings like a zebra, whereas *Bromeliodes tricolor* is a striking variegated form with the leaves striped with white and margined with rose carmine.

Ananas comosus variegatus, the variegated pineapple makes a most attractive subject for displays but benefits from a little heat in the winter.

Neoregelia carolinae 'meyendorffii' is an attractive rosette with green leaves. When it flowers it forms a rosette of vivid red bracts which last for several months prior to and after flowering.

Billbergias make attractive subjects in their tall stately growth.

Billbergia venezuelana is placidly banded with silvery grey. The inflorescences which last two or three weeks have beautiful red bracts.

Aechmea fulgens discolor is remarkable for the colourful berries it forms after flowering. The leaves are rich olive green, the reverse side being a deep reddish purple. It is extremely easy to grow and is worth a place in every shade house.

These interesting plants can be grown and exhibited in association with our orchids and will certainly help to swell the interest of the horticulturist for very little care.

Bromeliads support a fascinating group of plants and animals each of which is a small balanced unit, like a tiny aquarium.

In the water reservoir contained at the base of the leaves live thousands of tiny primitive animals and plants. Protozoa and Algae together live in balance to make a micro self-contained unit. Like other animals and plants however, they have their predators; thus various species of bladderworts which are aquatic flowering plants, trap the little swimming animals in their underwater leaves; they too, make their homes within the Bromeliad reservoir. Certain species of frogs have also adapted themselves to live and breed within the reservoir so that there is in effect a balanced ecology of aquatic animals and plants contained within the Bromeliads, the whole system being perched on the top of the forest trees in the tropical jungle.

Little might we realize that such a fascinating and unexpected world so exists; yet suitable Bromeliads attached to branches of garden trees and shrubs can bring it within the cultivator's own home garden to be enjoyed and studied.

Birds too are highly attracted to flowering Bromeliads, our native honey-eaters are constant visitors to them during their entire flowering season.

Box 28, Dee Why, N.S.W.

• QUEENSLAND ORCHID SOCIETY.

—The Annual General Meeting of the Queensland Orchid Society saw the following officers elected for 1960.

Patron: Sir John B. Chandler.

President: Mr. G. L. Piper.

Vice-Presidents (City): Messrs. H. V. McCabe, P. R. Wren, Mrs. E. Blackwatch.

Vice-Presidents (Country): Messrs. A. G. Cullimore (Maryborough), MacDonald (Charters Towers), R. Moller (Bundaberg).

Hon. Treasurer: Mr. P. Curley.

Hon. Secretary: Mr. K. McKenry.

Hon. Asst. Secretary and Librarian: Mr. E. Merritt.

Hon. Technical Adviser: Dr. H. E. Young.

Hon. Editor: Mr. P. K. Searle.

Hon. Auditor: Mr. D. J. C. Goffage.

Committee of Management: Messrs. S. E. Barnett, C. O. Dunn, P. K. Searle, E. A. Knoblauch, and W. D. Marshall.

• MANNING RIVER ORCHID SCTY.

—*December Meeting:*—Mr. E. W. Hibble screened films of orchids. This being the last meeting before Christmas, a party was held. Lobster, etc., was served by the ladies, while Christmas cake was handed round.

February Meeting:—Mr. H. Bond, of Marmong Point, returned a cheque which the Society had forwarded to him to cover his out of pocket expenses when he came up to judge at the recent show. He requested that the money be used in the prize list at the next Show. It was very much appreciated by members and it was decided to call the prize the "Harry Bond Award". At the conclusion of the meeting Mr. A. Willows screened films of orchids.

• It was with deep regret that members of Manning River Orchid Society learned of the passing on Tuesday, 1st March, 1960, after an accident, of Mr. W. Rothwell, of Forster.

He was patron of the Manning River Society and also Judge. (Having judged the exhibits at the first Orchid Show in 1958). He was a former judge and President of the New South Wales Orchid Society.

The late Mr. Rothwell will be greatly missed by members of the local society as his opinion was often asked for and he was always willing to give advice to those who required it.

Much sympathy will be expressed to Mrs. Rothwell who is also a member.

• REPORT OF ANNUAL MEETING OF THE IPSWICH ORCHID SOCIETY:

—The meeting was presided over by Mr. A. E. Roberts, Retiring President. The one-year-old Ipswich Orchid Society held its first Annual Meeting in the Liberal Party Rooms, East Street, Ipswich, on Tuesday, 2nd February, 1960.

This Society continues to grow and flourish and now has almost fifty members.

The officers elected for 1960 are:—Patron: Alderman H. V. Gibbs. President: Dr. J. R. Roper. Vice-Presidents: Dr. W. T. Gibbs, Mr. J. Halley, Mr. J. Ryan. Hon. Secretary: Mrs. C. Kelly. Hon. Asst. Secretary: Mr. G. Hart. Hon. Treasurer: Mr. C. F. Becker. Hon. Tec. Adviser: Mr. T. E. Hunt. Hon. Auditor: Mr. G. Hart. Committee: Mr. G. Hart, Mr. L. Lobley, Mrs. N. Wright, Mr. J. Burren. Librarian: Mr. C. R. Simpson.

• **RESULTS OF THE SYDNEY ORCHID SOCIETY SPRING SHOW** held in the R.S.L. Hall, Anglo Rd., Campsie, on the 26th September, 1959.

Champion Cymbidium: Dorchester Jeanette. Mrs. Bull.

Reserve Champion: Dorchester Jeanette.

Best Coloured Cymbidium: Cota x Lowi Concolor x Primulum. Mr. R. Mead.

Best Three Cymbidiums: 1st, Ispahan Mascot, Balkis Luath, Dorchester Jeanette. Mrs. Bull. 2nd, Dorchester Jeanette, Swallow Kingford, Balkis Luath. Mr. R. Mead.

Best Two Cymbidiums: 1st, Balkis Luath, Dorchester Jeanette. Mr. R. Mead. 2nd, Dorchester Jeanette, Dorchester Jeanette. Mr. R. Mead.

Best Three Coloured: 1st, Princess Astrid var. Dorothy, Robin Redbreast, Esmeralda. Mr. A. Chalmers. 2nd, Esmeralda, Firebird, Lowi Concolor x Primulum. Mr. R. Mead.

Best 4 Decorative: 1st, Cassandra Pastel Queen, Girrahween Red Star, Altair Luath, Ceres Girrahween. Mr. R. Mead. 2nd, Pauwelsii x Dante, Remus, Cassandra Warringal, Midlothian Greensleeves. Mr. R. Mead.

Best Export Cymbidium: 1st, Sandpiper Dorothy. Mr. A. Chalmers.

Best Native Orchid: Linguiforme. Mr. Christoffel.

Best Other Orchid: Den. Terence Reid var. Lugarno. Mr. B. Schwartz.

Special Prize: Den. Sir Frederick Moore. Mr. R. Mead.

Best Seedling: Unknown. Mr. M. Sutcliffe.

Best 6 x 4 Exhibit: 1st, Mr. R. Brady. 2nd, Mr. B. Schwartz.

MEMBERS' SECTION

Best Cymbidium (selected from Sections 2 & 3): Girrahween Gloria. Mr. G. Williams.

Best Coloured Cymbidium: Cota. Mr. P. Gilbert.

Best Two Cymbidiums: 1st, Girrahween Enid, Girrahween Gloria. Mr. G. Williams. 2nd, Girrahween Enid, Arabella Magnificent. Mr. E. Strachan. 3rd, Memoria Albertii, Princess Astrid Dorothy. Mr. P. Gilbert.

Best Red Cymbidium: Promona Tanandra. Mr. J. Jannese.

Best Green Cymbidium: Erica Sander. Mr. J. Jannese.

Best Yellow Cymbidium: Cota. Mr. P. Gilbert.

NOVICE MEMBERS' SECTION

Best Cymbidium: 1st, Swallow Soulangeana.

Mr. F. Goodman. 2nd, Louis Sander var. Kirribilli. Mr. Sutcliffe.

Best Coloured Cymbidium: 1st, Miranda Maisie. Mrs. Mortimer. 2nd, Celia Ashfield. Mr. N. Graham.

CAN CYMBIDIUMS BE GROWN ANYWHERE?

• We have come to the conclusion that it is futile to try to flower Cymbidiums in the warmer parts of Australia. The Northern Rivers in N.S.W. and Perth in the west are borderline areas. Anywhere north is usually considered too warm to induce flower spikes.

L. F. Hawkinson M.D., writes in the Californian *The Orchid Digest*, May-June, 1959, most interestingly about a Mr. Arthur L. Darsey who moved to the Sacramento district from Southern California with a large block of plants. To everyone's amazement Mr. Darsey turned up at the monthly meetings with spikes of fine flowers. It was assumed that he was lucky but when he brought rows of plants to the show and took home a silver trophy, the reporter, Mr. Frank W. Parker, thought he had better get into his family car and go to the spot and see how he did it.

He found Mr. Darsey grows the plants in a 20ft. x 50ft. house covered by clear fibre-glass with no other shade at any time winter or summer. He has two swamp coolers (probably evaporative coolers) $\frac{1}{4}$ and $\frac{1}{2}$ h.p. set to turn on thermostatically. Although summer temperatures in Sacramento may rise to 100° with very low humidity these coolers would drop the temperature to 92°. The heating equipment in winter maintains 55°.

The compost is 1 part sand, 2 parts peat, 4 parts fine fir bark, a little superphosphate and dolomite. Regular feeding consists of ammonium nitrate. No other gimmicks.

The results, 500 square feet space produce 400 well developed spikes. More as new plants reach maturity. One plant had 8 (eight) spikes.

Mr. Darsey says a house *exclusively* is required for Cymbidium and a good grower. His grower (Mrs. Darsey) says that you can grow Cymbidium anywhere if you have sunlight (absence of shading) and no other orchids in the same house to be considered. Fifty-five degrees at night, 92° in daytime, humidity, water and food.

This Californian experience opens up most interesting thoughts for our warmer north.

New Orchid Hybrids

October 1959

Reprinted from English Journal "The Orchid Review"

Name	Parentage	Flowered by
BRASSOCATTLEYA		
" Lydia	<i>B. digbyana</i> x <i>C. Estelle</i>	Wm. S. Teter
BRASSOLÆIOCATTLEYA		
" Helen Magin	<i>Crusader</i> x <i>C. Prince Shimadzu</i>	A. J. Magin (Sanders)
" Marguerite Brightman	<i>C. Triumphans</i> x <i>Joyance</i>	Armacost & Royston
" Mem. Richard Alan Paraz	<i>Marion Ryerson</i> x <i>Lc. Princess Ishtar</i>	Duke Paraz
" Oregon Trail	<i>Lc. Golden Ray</i> x <i>Blanche Okamoto</i>	Rod McLellan Co.
" Sandra Brown	<i>Bc Aloha</i> x <i>Lc. Princess Margaret</i>	Col. W. D. Brown (Kodama O.N.)
" Yoshiharu Kondo	<i>Lc. Hinahina</i> x <i>Bc. Hartland</i>	Roy Yahiro (M. Miyamoto)
CATTLEYA		
" Little Angel	<i>o'brieniana</i> x <i>loddigesi</i>	Jones & Scully
CYMBIDIUM		
" Dorpat	<i>Louis Sander</i> x <i>Fairy Queen</i>	Wilhelm Hennis
" Ngaire	<i>Clarissa</i> x <i>Rio Rita</i>	McBean's Orchids
CYPRIPEDIUM		
" Berit	<i>Leeanum</i> x <i>Scarlet Prince</i>	Wilhelm Hennis
" Hils	<i>Golden Sheba</i> x <i>Scarlet Prince</i>	"
" Ith	<i>Golden Sheba</i> x <i>Sanactæus</i>	"
" Le Breuil	<i>Carola</i> x <i>Exelmans</i>	Horticoles "Le Breuil"
" Solling	<i>Frosty Moon</i> x <i>Scarlet Prince</i>	Wilhelm Hennis
" Vallarow	<i>Rosemary Waithman</i> x <i>Harrow</i>	Valleamar Gardens
" Vallemma	<i>Emma</i> x <i>Balaclava</i>	"
" Weser	<i>Scarlet Prince</i> x <i>Cardeba</i>	Wilhelm Hennis
DENDROBIUM		
" Aleta	<i>Robert Ballard</i> x <i>Lady Constance</i>	Y Inouye
" Balleriana	<i>Lani</i> x <i>Lady Hamilton</i>	"
" Lady Ess	<i>Waikiki Beauty</i> x <i>Lady Fay</i>	H. Kushima
" Pinya	<i>Arcuatum</i> x <i>Lady Hamilton</i>	C. Chuyindra
" Tinker Bell	<i>Lady Constance</i> x <i>taurinum</i>	H. Kushima
EPIDENDRUM		
" Mabel Kanda	<i>atropurpureum</i> x <i>floribundum</i>	T. Shimamoto
LÆIOCATTLEYA		
" Hinahina	<i>Walter Jewell</i> x <i>St. Gothard</i>	Roy Yahiro (M. Miyamoto)
" Joseph P. Smith	<i>Gertrude Hampton</i> x <i>Tokyo Rose</i>	Grayce Hecker
" Mark Kurao Hoshino	<i>S. J. Bracey</i> x <i>Princess Margaret</i>	Dr. F. Y. Hoshino
" Mem. Daniel R. Scobell	<i>Scott Wilcox</i> x <i>Mem. Walter Armacost</i>	Grace Hecker
" Ruth Zena Newman	<i>Costa Rica</i> x <i>Amber Glow</i>	Esaparn of Bangkok (Rivermont)
" Vallaurea	<i>Bonanza</i> x <i>C. dowiana</i>	Valleamar Gardens
" Vallantis	<i>Bonanza</i> x <i>Atlantis</i>	"
MILTONIA		
" May Moir	<i>spectabilis</i> x <i>Goodale Moir</i>	G. Moir
ONCIDIUM		
" Moir	<i>altissimum</i> x <i>leucochilum</i>	"
" Splinter	<i>sphacelatum</i> x <i>leucochilum</i>	" (Mr. Splinter)
" Trinidad	<i>crispum</i> x <i>citrinum</i>	"
PHALÆNOPSIS		
" Pink Princess	<i>Grace Palm</i> x <i>sanderiana</i>	Mrs. E. R. Markell (B. O. Bracey)
VANDA		
" Blue Cloud	<i>teres</i> x <i>Frankensteiniana</i>	G. Moir
" Hawaiian Blue	<i>Frankensteiniana</i> x <i>sanderiana</i>	"
" Hawaiian Kai	<i>Mevr. L. Velthuis</i> x <i>Onomea</i>	Roy Yahiro (Tanouye)
" Joanne Nutting	<i>Kalihi Beauty</i> x <i>Walter F. Dillingham</i>	Col. L. Nutting (M. Miyamoto)
" Mary Tan	<i>Princess Beatrix</i> x <i>Onomea</i>	Tan Kah Kheng

November 1959

Name	Parentage	Flowered by
BRASSOLÆLIOCATTELEYA		
" August Friar	<i>C. bicolor</i> x The Friar	David Sanders' Orch. (Sanders)
" Selsfield Cream	Nugget x <i>Lc. Goldfish</i>	David Sanders' Orch (Sanders)
CATTLEYA		
" Granlor	<i>bicolor</i> x <i>granulosa</i>	Rod McLellan Co.
" Lady Lillian	Lady Veitch x Minnehaha	Mrs. Leo K. Gold (Mansell & Hatcher)
" Mount Olympus	Ethel Bishop x Bow Bells	Beall Greenhouse Co.
" Redtop Mountain	<i>guttata</i> x Princess Royal	"Clarelen" Orchids)
" Russian Hill	<i>harrisonia</i> x Portola	Rod McLellan Co.
CYMBIDIUM		
" Mary White	Intermezzo x Wren	Mrs. D. Brunton (Mansell & Hatcher)
" Rosemont	Jocosity x Pauwelsii	Carl R. Adams, Jr.
" Ruby Rapids	Swallow x Sussex	Beall Greenhouse Co.
CYPRIPEDIUM		
" Alderbrook	Menthule x Winston Churchill	
" Karl A. Meyer	Wakeswood x Frosty Moon	Wilhelm Hennis
" Porclava	Portia x Balaclava	Rod McLellan Co. (E. W. McLellan)
DENDROBIUM		
" Pikul	Indonesia x <i>schulleri</i>	Vilas Tancharoen
" Rosalind Cheok	Lim Tar Fang x <i>gouldii</i>	Raymond Cheok (Yeoh Bok Choon)
EPILOELIA		
" Ressay Toy	Epid. Phœnecium x <i>L. anceps</i>	Wm. Osment
HAWAIIARA		
" Sunglow	Renanopsis Lena Rowold x <i>V. spathulata</i>	Richard Fujio (G. Moir)
LÆLIOCATTELEYA		
" David Lozoya	Joseph Hampton x Bonanza	L. H. Westenberger
" Ethel Daniels	<i>C. dowiana</i> x Locarno	Z. Daniels
" Gante Pequeno	<i>C. harrisonia</i> x Bacchante	Rod McLellan Co.
" Iron Rapids	Elizabeth Lind x Gitche Manito	Beall Greenhouse Co.
" Isabel Abarca	<i>C. Adelaide</i> Cutler x South Esk	Pedro Pascual (Roy K. Fields)
" Jane Coney	Trempealeau x Mary Rose	Rod McLellan Co.
" Panther Lake	Texas x Elizabeth Lind	Beall Greenhouse Co.
" Srisophon	<i>C. King George</i> x Carmencita	Lieng Tajasophon
" Swiftsure Light	<i>C. Enid</i> x Snowdrift	Beall Greenhouse Co.
" Vance Langford	Dorothy Fried x Dinard	Lee S. Langford
*LYONARA		
" Fiesta	<i>Lc. Issy</i> x <i>Schomburgkia thomsoniana</i>	G. Moir
ODONTOGLOSSUM		
" Yukon Harbor	Crispania x Natrium	Beall Greenhouse Co.
" Yellowstone Basin	Midas x Golden Harvest	" "
ODONTONIA		
" Cusaena	Andraena x <i>Odm. Alorcus</i>	Charlesworth & Co.
SOPHROLÆLIOCATTELEYA		
" Sinalma	<i>Lc. Felsina</i> x Thelma	" "
PANDA		
" Flora Macdonald	Haleakala x <i>sanderiana</i>	D. J. Macdonald (J. E. Jones)
" Phœbe Bell	<i>insignis</i> x Manila	James H. Bell (Wm. Kirch)

* New generic cross

CORRECTION TO NOVEMBER LIST, 1956:—

Renanopsis Copper Coin should have read *Hawaiiara* Copper Coin (*V. Ellen Noa* x *Renanopsis* Lena Rowold). New generic cross.

CORRECTION TO JULY LIST, 1958:—

Epilaelia Ariza-Julia should read *Epilaelopsis* Ariza-Julia (*Laeliopsis domingensis* x *Epid. eggersii*). New generic cross.

December 1959

Name	Parentage	Flowered by
BRASSOCATTLEYA		
" Cockleford	Imperialis x <i>C. mossiae</i>	Geo. E. Baldwin
" Dalida	Veronique x <i>C. Remy Cholet</i>	Pierre Cholet
" Hakujitu	<i>C. Atlantic</i> x Queen Alexandra	Li Chin-Sheng (Yonezawa)
" Pai Sa	Hakujitu x <i>C. Sedlescombe</i>	Li Chin-Sheng
BRASSOLÆLIOCATTLEYA		
" A. J. Schreiber	<i>Lc. Golden Madonna</i> x Medbar	Orchid Ranch, Inc. (Clarelen)
" Daitowa	<i>Lc. Dinard</i> x Emmatonii	Li-Chin-Sheng (Kaga)
" Deep Cove	Norman's Bay x <i>Lc. Mamie Eisenhower</i>	Beall Greenhouse Co.
" Feng Nien	Daitowa x <i>Lc. Momus</i>	Li Chin-Sheng
" Golden Glades	Malvern x Tiara	Thornton's Orchids (Gore)
" Helen Downs	Zeecrabbe x Norman's Bay	A. J. Magin (Sanders)
" Rachael Kennedy	Antoinette x <i>C. Minucia</i>	Orchid Ranch, Inc.
CATTLEYA		
" Juliet Thompson	Bow Bells x Mary B. Ireland	Westenberger Orch. Co.
" Mary Gibb Jones	Bow Bells x Silver Moon	Rivermont Orchids
" Palann	Palatnie x Ann Sander	Roger Sander (Sanders)
" Souvenir	Remy Cholet x Fred Sander	"
CYMBIDIUM		
" Lola Brandt	Choletti x Swallow	Pierre Cholet
CYPRIPEDIUM		
" Goose Green	Bahram x Chardmoore	David Sander's Orch. (Sanders)
LÆLIOCATTLEYA		
" Adolph Hecker	<i>C. Porcia</i> x Bonanza	Grayce Hecker
" Audrey Sander	Vallisa x <i>C. Dinah</i>	Roger Sander (Sanders)
" Cormorant Passage	<i>C. Peetersii</i> x Elizabeth Lind	Beall Greenhouse Co.
" Freddie Elton	<i>C. Gloriette</i> x Atlantis	Thornton's Orchids (Gore)
" Hidden Basin	<i>C. Varuna</i> x George MacDonell	Beall Greenhouses Co.
" Jean MacArthur	Isabel Sander x <i>C. Ardmore</i>	Mrs. Patricia Murphy
" Laurie Lynn	Cuesta x Bonanza	Westenberger Orch. Co.
" Lillimoss	Lillian Daly x <i>C. mossiae</i>	George E. Baldwin
" Madge Reed	Sungu x Eva Robinson	Orchid Ranch, Inc.
" Sentinel Island	<i>C. Tallus</i> x George MacDonell	Beall Greenhouse Co.
" Valleberts	Bonanza x <i>C. Nellie Roberts</i>	Vallemar Gardens
" Vallebirt	<i>C. Firebird</i> x Candidate	" "
" Valledor	Bonanza x Dinador	" "
" Valletta	Bonanza x Vandeletta	" "
LÆLIOCATTLEYA		
" Vallisa	Vallandina x Isabel	Roger Sander (Sanders)
PHALÆNOPSIS		
" Memoria Loke Sokeen	Chieftain x Jane L. Kingsbury	Mrs. S. E. Chow (Kirch)
POTINARA		
" Edward Lee	<i>C. Prince Shimadzu</i> x Medea	Thornton's Orchids (Gore)
SOPHROLÆLIOCATTLEYA		
" Red Lodge	Anzac x <i>C. Redtop Mountain</i>	Beall Greenhouse Co.
VANDA		
" Dewi Sri	Diana x <i>teres</i>	Indonesian Orch. Soc. (Khoe May Seng)
" Quee-Lan Yeoh	Ruby x <i>sanderiana</i>	Yeoh Bok Choon
" Yong Yuet Lim	Maucise Restrepo x <i>sanderiana</i>	Lim Chooi Seng

CORRECTION TO JULY 1959 LIST:—

Lc. Pai Fieng should read: *Lc. Pai Feng*.*Lc. Yin Fieng* should read: *Lc. Yin Fang*.

CORRECTION TO AUGUST 1959 LIST:—

Cattleya Salome should have as flowerer Rolf Altenburg.*Lc. White Easter* should read (*Isabel Sander* x *C. Mille Louise Pauwels*).

LIMBERLOST ORCHID SEEDLINGS

Shipped bare root ex 1½" pots.

- No. 141 V. Kon Tiki x Opsisanda K. Morley
 184 V. Manila x Op. K. Morley
 193 Dend. Canaliculatum var. alba x Dend
 Dicumphum
 200 V. G. Triboulet x V. Manila
 194 V. Teres Alba x V. Ellen Noa
 242 V. Diana x V. La Paloma
 243 V. Sanderiana x V. G. Triboulet
 244 D. Mirbellianum x D. Bigibbum
 245 C. Loddigessii x LC Aphrodite
 255 D. Anouk x D. Agnes Ann
 256 (V. Suavis x V. Honolulu) x Sanderiana
 258 D. Lady Hamilton x D. H. Fukumura

- No. 251 V. Waipuna x V. Sanderiana
 177 D. Phalaenopsis Alba x D. Phalaenopsis var.
 Snow White
 261 V. Sanderiana x V. G. Myamoto
 288 V. Batemanii x (Sanderiana x Renan. Lena
 Rowold)
 327 D. Schroederianum bicolor x D. salak (Bour-
 ners var.)
 329 D. Waikiki Girl x D. Amber Glow
 350 D. Pompadour x D. P. Peterson
 394 V. Hindsii x V. Joaquim (Atherton)
 377 V. Spathulata x V. Ellen Noa
 396 V. Diana x V. Rose Marie
 134 D. Superbum var. Limberlost

Above plants 7/6 ea. £4/4/- per doz. assorted. Please add 7/6 to cover Forwarding. Orders and Inquiries to:—J. E. JONES, LIMBERLOST NURSERY, P.O. FRESHWATER, CAIRNS, N.Q.

SHOULD ORCHIDS HAVE NEIGHBOURS?

Enhance Your Display of Orchids in bloom with Exotic and Colourful Foliage

Anthurium Hookerii
 " Crystallinum
 " Bakerii
 " Acutifolium
 " Acutifolium x Crystallinum
 Alocasia variegata
 Alexandra Palm
 Aphelandra Louisa
 Ctenanthe lubbersiana
 Cissus discolor
 Dracaena sanderiana
 Dieffenbachia picta
 Erymophloeus normandyii

Monstera Deliciosa
 Philodendron imbe
 Pereskia aculeata
 Philodendron scandens variegata
 Peperomia Sweetheart
 Peperomia Sandersii
 Peperomia Black Boy
 Rheo Discolour variegata
 Syngonium albo marginatum
 Syngonium wendlandii
 Strobilanthes dyerianus
 Setcreasea striata
 Vanilla planifolia

Above plants 4/3 ea. £2/2/- per doz. assorted. Please add 7/6 to cover forwarding. Orders and Inquiries to:—J. E. JONES, LIMBERLOST NURSERY, P.O. FRESHWATER, CAIRNS, N.Q.

LIMBERLOST FERNWOOD FIBRE

(With Sphagnum Additive)

Graded, dust free ready to use. An ideal Orchid potting medium.

FINE

For Young Seedlings
 and Planting out flasks

MEDIUM

Seedlings and
 Propagation to 4" pot

COARSE

Advanced and
 Adult plants.

Per Bag (Contents approx. 10 quarts) . . . 10/6. (3 bags for 30/-)

FROM

J. E. Jones,

"LIMBERLOST" NURSERY
 P.O. FRESHWATER — CAIRNS — N.Q.

*Agents for the "Australian Orchid Review"
in Great Britain*

Messrs. B. F. Stevens & Brown Ltd.,
Library & Fine Art Agents,
77-79 Duke Street,
Grosvenor Square, W.1.
LONDON

are carrying stocks of current and back numbers of the *Australian Orchid Review*. Readers in Great Britain should communicate with them regarding their supplies.

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
"Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums From India

All flowering size..

Dend. Parishii	
" Chrysotoxum	Dark rose & purple.
" Formosum var:	Yellow gold.
" giganteum	White. Orange lip.
" Formosum	
" Jamesianum	White & cinnamon red
" Aggregatum	Yellow gold.
" Dalhousianum	Cream & yellow.
" Nobile var: pendulum	Purple.

All 30/- each

Dend. Primulinum	
" Fimbriatum var:	Pale to dark mauve.
" ocellatum	Yellow. Maroon throat.
" Farmerii	Pale pink.
" Thysiflorum	White with orange lip.
" Moschatum	Apricot.
" Pierardii	Pale mauve.
" Hildebrandii	White & yellow.
" Densiflorum	Yellow gold.

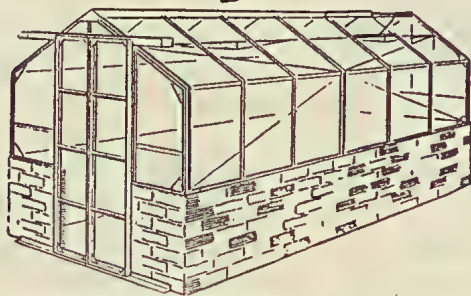
AIRFREIGHT EXTRA. ALL PLANTS **30/-** EACH. FLOWERING SIZE.

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS, NTH. QLD.

Send for general price list of other orchids

ALUMINIUM ALLOY
PREFABRICATED

Waldor Greenhouses



The Waldor "Junior"—Size: 8 feet x 12 feet
Price: £103. 15. 0.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.
34 Queens Road, Melbourne, S.C.2.
Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Rd., Bexley, N.S.W. Phone LY7985

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE

Gives an invitation to all interested in growing orchid plants under cool conditions. See the large range of genera that will grow and flower without heat.

Inspection Saturday afternoons or Sundays. Nobody asked to buy. Bring your problems and discuss them.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

NEW TYPE DECAYED WOOD ORGANIC COMPOST

This compost is made in accordance with articles published in this journal, ready to use and requiring no further additions.

PRICE 35/- per corn sack ex-nursery

ORDERS TAKEN NOW

R. S. DICKSON

18 BUENA VISTA AVE.

DENISTONE. WL3180

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Beqd (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

ORCHID AND GARDENING BOOKS

ORCHIDS OF THAILAND (Seidenfaden & Smitinana). To be published in 6 or 7 parts by the end of 1961. English text, colour plates. Parts 1 & 2 will be available in 6 weeks. Price £1.15.0. each part, postage extra, only by subscribing to the whole work now. Book your order now!

EXOTICA (A. B. Graf). New edition, hundreds of illustrations. £14.19.3. Post 7/6d.

ORQUIDEAS COLOMBIANAS—Colombian Orchids (M. O. Hernandez). English text. Ills. £6.4.0. Post 6/-.

NEW WAYS WITH DRIED FLOWERS (Ruth Gannon). Ills. £1.7.0. Post 1/9d.

COMMERCIAL HYDROPONICS (Dr. Maxwell Bentley). Facts & Figures. Col. Plates. Limited edn. £22.11.6. Post 7/6d.

MARION CRAN TITLES—A large selection to choose from. S/hand £1.10.0. each title. Post 1/9d. List on application.

ORCHIDS FOR THE CALIFORNIA AMATEUR (H. M. Butterfield). Col. & B/W plates. 4/6d. Post 6d.

PHILIPPINE ORCHIDS (R. S. Davis & N. L. Steiner). Ills. £3.0.0. Post 2/-d.

ORQUIDEAS DE MEXICO (N. P. Wright). 40 Colour Plates, English & Spanish text. £5.19.9. Post 2/-d.

ORCHIDS AS HOUSE PLANTS (R. T. Northen). Well ills. £2.0.3. Post 1/9d.

ORCHIDS OF PERU (Charles Schweinfurth). Ills. English text. £2.14.9. Post 2/3d.

ORCHID CULTURE IN CEYLON (edited E. Soysa) 1943. Ills. Out-of-print & scarce. Nice copy. £10.10.0. Post 3/-d.

ORCHIDS—THEIR CULTURE (Bruce Hogg, Melbourne). Colour plates. £2.10.0. Post 1/9d.

ORCHIDS (M. Lecouffe & H. Rose). Ills. £1.8.3. Post 1/6d.

We search the world successfully for Rare and Out-of-print Books.

Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.

We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L. C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION

GALVANISED RAIL FITTINGS



Clips or Tees	No.	Rail Standard	Price
	107	$\frac{3}{4} \times \frac{3}{4}$	1/10 ea.
	108	$1 \times \frac{3}{4}$	1/10 ea.
	109	1×1	1/10 ea.
Corner Fittings	186	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	4/6 ea.
	180	$\frac{3}{4} \times 1 \times \frac{3}{4}$	4/6 ea.
	181	$1 \times 1 \times 1$	5/3 ea.
Crosses	106	$\frac{3}{4} \times \frac{3}{4}$	3/2 ea.
	105	$\frac{3}{4} \times 1$	3/2 ea.
	104	1×1	4/5 ea.
Knobs	155	1	1/8 $\frac{1}{2}$ ea.

$\frac{3}{4}$ Galv. Pipe
1 Galv. Pipe
8' Galv. Blazing Bars
Glazing Bar Clips

1/0 $\frac{1}{2}$ per ft.
1/5 per ft.
6/- per len.
5/- per 100.

16 x 14 x 21 Horti-
tural Glass 64 sheets to
case = 100 sq. ft. 93/3 per sq. ft.
Loose extra

**SWANS
LTD.**

SYDNEY
PARRAMATTA
HURSTVILLE
CHATSWOOD
WOLLONGONG

406/410 Elizabeth Street B0931
49 Aird Street YL0681
135 Forest Rd. 57 0311
932 Pacific Highway JA3462
67/69 Burelli Street B3301

UNSURPASSED QUALITY
ORCHIDS

by
(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

Orchids From India

All flowering size.

Aerides Lawrenceiae	Yellow & purple. Tipped with green	40/- each
Rhynchostylis Retusa	Waxy white with pink spots.	30/- "
Phaius Wallichii	Orange yellow with reddish purple	30/- "

AIRFREIGHT EXTRA.

FLOWERING SIZE

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS, NTH. QLD

Send for general price list of other orchids.

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

The Largest Raisers of Cymbidiums in Australia

20,000 Seedlings always in Stock

Raised in Australia by Australians, bred from the best Australian and overseas parents.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 10/- to 20/-	} ex Nursery
in 6" pots from 20/- to 30/-	

Early flowering and exhibition crosses always available. Many of our seedlings are flowering in 12 months, while the balance should flower in 2 years.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Monday to Saturday, 8 a.m. to 5 p.m. Sundays by appointment only.

Our seedlings are also available from Mr. F. Slattery, Bexley, at list prices and Mr. H. Bond, Marmong Point, Teralba, N.S.W.

WONDABAH ORCHIDS

724 Pennant Hills Rd.
Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editors: G. H. Slade, Box 13, Homebush, N.S.W., A. B. Porter, 14 Henderson Rd.,
Eastwood; A. R. Persson, Coronation Ave., Mosman.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

President: E. A. KNOBLAUCH

Patron: Sir JOHN B. CHANDLER

Honorary Secretary: P. K. SEARLE, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

Patron: His Excellency The Governor of Victoria, General
Sir DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Patroness: Lady BROOKS

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets First Thursday: Royal Society Rooms, Institute Building, North Terrace and
Kintore Ave., Adelaide.

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: N. CHRISTOPH, 18 Clinton Avenue, Myrtle Bank.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Secretary: H. E. Foote, 12 Ryrie Ave., Como.

Treasurer: C. W. O'Connor, 42 Birkett Street, Bedford Park.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross.

President: F. W. Chilvers.

Hon. Secretary: Mrs. R. F. Gee,

16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

Australian Orchid Review



PUBLISHED QUARTERLY

VOLUME 25, No. 2

PRICE 3/6

JUNE, 1960



DENDROBIUM THYRSIFLORUM

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

Orchids and Orchid Supplies

A splendid range of all types of Orchids suitable for Bush and Glass House culture is always available.

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS at prices YOU CAN AFFORD.

TOP LINE CYMBIDIUM AWARD AND SHOW VARIETIES. Also some of the WORLD'S FAMOUS STUD PLANTS including ROSANNA PINKIE FCC RHS, RIO RITA RADIANT FCC RHS, ICARIUS EXBURY AM RHS. NAMKHAN, NAOMI, DANTE FCC RHS.

VANDAS. Top Line HAWAIIAN CROSSES including NELLIE MORLEY, JOHN NOA'S 512 CROSS.

PHALAENOPSIS. Specimen Plants in First Class Whites. Flowering Size Plants of MISTINGUETTE (ROTHMAGO X HELLE). First Class Pinks.

CATTLEYAS. Large Selection of Flowering Size Plants and Seedlings.

CYPRIPEDIUMS. Big Selection of Hybrids and Species.

DENDROBIUMS. Hybrids and Species.

COELOGYNES, ONCIDIUMS, BRASSIA BRACHYATA, ODONTOGLOSSUM-GRANDE, ZYGOPETALUM-MACKAYI, STANHOPEA-TIGRINA, LAELIA ANCEPS and many others for Bush House culture in and around Sydney.

JAPANESE OSMUNDA FIBRE 3/6d. lb. AUSTRALIAN TODEA FIBRE 2/6d. lb. TREE FERN SLABS 4/- each. ATLAS FISH EMULSION 13/6d. pint.

TAN BARK, PEAT MOSS, READY MIXED COMPOST, PEARLITE, SPHAGNUM MOSS, WISS ORCHID SHEARS 32/6d. (Postage 9d.), MONARCH INSIDE HOUSE FOGGER 23/- (Postage 1/-).

N.S.W. Agent for WALDOR GLASS HOUSES. These houses are in use at the Nursery and may be inspected there.

Plants sent to Anywhere in Australia and Overseas on request.

Please send 5d. Stamp for Price List.

Frank Slattery

Phone

LY7985

12 EDDYSTONE RD., BEXLEY

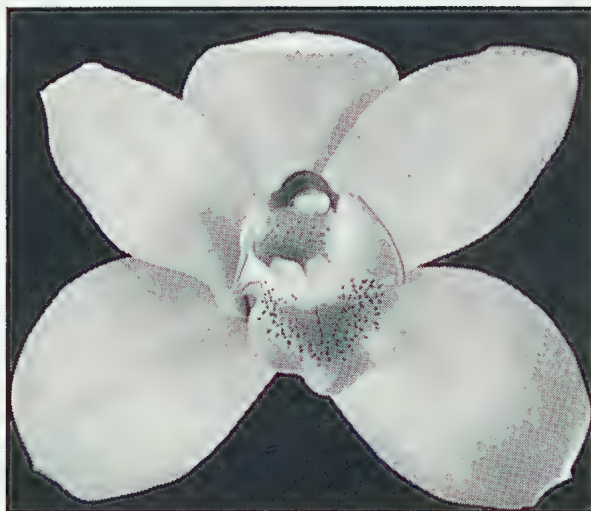
(off Stoney Creek Rd., opp. Bexley Park)

Phone

LY7985

BALKIS 'PERFECTION'

*Special attention given to
Country and
Interstate orders.*



The world famous Balkis "Perfection" has been crossed with other good parents to produce flowers of outstanding quality. Seedlings of this parentage still available.

D.P. 4087 SAN FRANCISCO, Blue Smoke Green Meadow x Balkis "Perfection" ex ground beds £15 to £25.

D.P. 4093 PRINCE CHARLES, Balkis "Perfection" x Pauwelsii Compte de Hemptine FCC/RHS

ex 6" pot:	ex 8" pot:
£5.10.0	£12.10.0

D.P. 4101 FLAMINGO NOBILIOR x BALKIS PERFECTION	
£5.10.0	£12.10.0

D.P. 4103 ETTA BARLOW, Rosanna Pinkie FCC/RHS x Balkis Perfection	
£5.10.0	£12.10.0

D.P. 4107 SIMLA, Dante FCC/RHS x Balkis Perfection	
£5.10.0	£12.10.0

D.P. 4150 SAN FRANCISCO, Balkis Perfection x Blue Smoke Sea Green ex ground bed, £15 to £25.

dos pueblos

Orchid Company
(AUST.) PTY. LTD.

Telephone:
98-6321

P.O. BOX 90

DEE WHY

N.S.W.

Situation: South Creek Rd., Dee Why, N.S.W.



R a m b u n c t i o u s S e e d l i n g s

are driving us out of glasshouse space—so we offer this choice selection of community seedlings from our world-renowned crosses. Ready for 2½ or 3" pots. Innumerable community seedlings purchased "yesteryear" are now winning our customers the highest awards.

- 2083 Lc. BERNICE FARRELL (Lc. Bacchante 'Burgundy' x Lc. Princess Margaret 'Magnifica'). Prolific, large, dark, controllable. Fall.
- 3226 (C. Harrisoniana 'Robert' x Lc. Mary Rose 'Exquisita' A.M., A.O.S.) C. Harrisoniana contributes substance, outstanding keeping qualities. 4 to 6 flowers per stem. Fall, variable.
- 3346 (Lc. Golden Gate x C. Harrisoniana). Strong bifoliate, medium size, pink to peach, long lasting. Summer.
- 3435 (C. Dorothy Mackaill 'Shasta' x C. Bengrave). Very productive White with orange-yellow throat. Spring.
- 3636 (Lc. June McQuiston 'Incentive' x Lc. Vanity 'Conceit'). Excellent large white with good dark labellum. Summer.

6 COMMUNITY SEEDLINGS (£4/6/2 Value) ONLY £3/8/3

Minimum—2 of any cross

SHIPPED OVERSEAS F.O.B. SOUTH SAN FRANCISCO

Write for complete community list and quantity discounts.

*Shipped out of flat
in polyethylene bags.*

*Please enclose remittance and
shipping instructions.*

Rod McLellan Co.

1450 El Camino Real, South San Francisco, Calif., U.S.A. Cable: RODCO.

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cypripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

The Largest Raisers of Cymbidiums in Australia

30,000 Seedlings always in Stock

All plants hybridised and grown in our own nursery.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 15/- to 20/-	} ex Nursery
in 6" pots from 25/- to 30/-	

Early flowering and exhibition crosses always available. Divisions and full clones of flowering plants now available.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Will be open all week-ends for inspection of seedlings in flower.

Our seedlings are also available at list prices from Mr. F. Slattery, Bexley, and Mr. H. Bond, Marmong Point, Teralba.

WONDABAH ORCHIDS

724 Pennant Hills Rd.

Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

ROY DEANE

expert grower and exporter of Orchids

INVITES YOU TO . . . "GREENACRES"
ORCHID FARM



See the magnificent display of cymbidiums flowering in all their colourful glory on the picturesque hillside slopes of "Greenacres"—Australia's loveliest Orchid Farm. There, Roy Deane will answer all your questions and give full advice on the growing and cultivation of Orchids for competitive exhibition and for Export Trade

Grow World Famous Greenacres Orchids . . . for profit as well as pleasure. Catch the overseas markets early with the highest quality blooms from Greenacres Farm and profit is assured!

★ SPECIAL OFFER!

For £50 you can get 20 small plants of Greenacres Orchids which will give Balanced Flowering from Early JUNE through to OCTOBER
Plants have a well established root development and are growing vigorously.

All plants are specially selected by Mr. Roy Deane personally with his extensive experience as a grower and exporter of Orchids to every country in the world as your assurance of complete satisfaction. Call and inspect . . . special quotation for individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

GREAT WESTERN HIGHWAY, VALLEY HEIGHTS
ON THE LOWER BLUE MOUNTAINS, NEW SOUTH WALES

PHONE: SPRINGWOOD 129

PHONE: SPRINGWOOD 129

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £6.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

Flowering size English Odontiodas and Odontoglossums.

Miltonia seedlings, full flowering size, at 50/-.

Hawaiian Dendrobium seedlings of the best crosses, from 8/6

Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.

French and American Phalaenopsis seedlings, ranging in price from 15/- to £5, according to size and cross.

Interesting new Epidendrum, Diacrum and Allied Intergeneric Seedlings.

Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of imported Cattleya seedlings in all sizes for you to select from. These range in price from 12/6 for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(Cymbidium Lillian Stewart, 'Mona Lisa')

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim.

$\frac{1}{4}$ terete vandas

Vanda T.M.A. Beautiful apricot blooms. Bright orange lip	35/-	each.
" Nellie Morley. Strawberry pink. Free flowering	30/-	"
" Emma Van Deventer x V. Ellen Noa. Cream. Scarlet & Gold	25/-	"
" Velthius x V. Onomea. Pink, but some blue	40/-	"
" Velthius x V. Ohuohu. Pink to red	40/-	"

Sizes for all above 5" to 9" high.

30/-
each
6" to 12"
high

830	Dendrobium	veratrifolia x Dend. taurinum.
964	"	broomfieldii x Dend. taurinum.
772	"	Hawaii Nui x Dend. stratiotes
836	"	Schroderianum x Dend. taurinum
1021	"	Toftii x Dend. phalaenopsis alba.
218	"	veratrifolia x Dend. broomfieldii.
"	"	Louis Bleriot (D. superbiens x Schroderianum FCC).

689	Vanda	Miyamoto x Vanda Dearei
643	"	tricolor x Vanda Luzonica.
868	"	Miyamoto x Rénanthera Storei
730	"	suavis x Rénanthera Storei
942	Arachnis	Ishbel x Vanda Manila

30/-
each 6" to 12"
high

15/-
each
4" to 6"
high

830	Dendrobium	veratrifolia x Dend. taurinum
964	"	Broomfieldii x Dend. taurinum
1021	"	Toftii x Dend. phalaenopsis alma
772	"	Hawaii Nui x Dend. stratiotes
"	"	Louis Bleriot (D. superbiens x D. Schroderianum (FCC.).
1037	"	Bali x Dend. Mauna Kea.

643	Vanda	tricolor x vanda Luzonica.
689	"	Miyamoto x vanda dearei
882	"	Mary Foster x Vandopsis lissochiloides.
"	"	flammerolle x vanda suavis.
650	"	Boschii x vanda Sanderiana.

15/-
each 6" to 12"
high

Add postage and air freight.

KIRKWOODS ORCHIDS

342 Sheridan Street, Cairns North, North Queensland.

Phone: 2385

Miscellaneous Orchids

Grow these fascinating orchids and have flowers
throughout the year.

Now available:

LAELIAS

Albida, Jongheana, Speciosa, Anceps.

ONCIDIUMS

Varicosum, Rogersii, Nona, Jonesianum, Sarcodes, Marshallianum,
Tigrinum.

ODONTOGLOSSUMS

Laeve, Citrosum, Grande, Schlieperianum, Rossii, Cordatum.

EPIDENDRUMS

Stanfordianum, Vitellinum, Majus, Falcatum.

SOPHRONITIS Grandiflora

CYNOCHEs Chlorochilum

CHYSIS Bractescens

LYCASTE Skinneri, Cruenta, Tricolor.

BRASSOVOLA Glauca, Digbyana.

CATTLEYA Citrina, Bowringiana

Please apply for our illustrated brochure.

Plastic pots in sizes 2", 3", 4", 5", 6", 7", 9", 12"



Country visitors
especially invited
to visit our
Nursery.

Telephone:

98-6321

P.O. BOX 90

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

N.S.W.



Top Quality Cymbidiums

Arabella, Magnificent,
H.C., A.M.
Arabella, Waverley, H.C.
(twice) A.M.
Balkis, Burraneer
(Like Luath)

Carisbrook, Florence, A.D.
Cassandra, Evadne, A.M.
Cassandra, Txoteth, A.M.
Celia, Tanandra (Prize
Green—Early)

Ceres, F. J. Hanbury,
A.D. (twice).
Ceres, Girrahween, A.M.
Ceres, Westminster, (spe-
cial pink).
Charm, Elegance, A.M.,
H.C. (Early).
Cordelia Kurfingai, A.D.
(Colour Champion).
Cygnus, Janet (large,
cinnamon).

Cygnus, Magnolia, H.C.
Cygnus, Opalescence,
H.C.

Dracolan, Haberfield.
Eagle, Snow White (all
white).
Esmerelda (Prize Green).

Falcon, Illawarra.
Flamingo, Allambie, H.C.
(twice).

Girrahween, Enid, A.M.,
1st Class Certificate.
Girrahween, Gloria, A.M.
Gloriana, Tudor Rose,
(The Champion Pastel
Pink).

Historian, Lindfield, H.C.
Ispahan, Mascot, H.C.
(twice).
Joyance, Cinnamon, H.C.

Joy Sander, Ruth, H.C.
Joy Sander, Triumph.

Louis Sander, Girrah-
ween (A Champion
Pastel Pink).
Louis Sander, Kirribilli
A.M. (twice).

Miranda, Maisie A.M.
Nirvanah, Warringal, H.C.

Peri, Good Big Yellow
Lime Green.

Plover, No. 1 (Excellent
Green).

President Wilson, Haber-
field.

Princess Elizabeth, The
Giant.

Princess Elizabeth, Reece,
H.C.

Princess Margaret, Hab-
erfield.

Priam Ada Meech, H.C.
(Twice).

Profusion Violacia. (Pink
Champion).

Promona Tanandra, A.D.

Sandpiper Dorothy, H.C.
Sussex, Laelia Sasso,

H.C. (twice), A.D.,
A.M.

Swallow, Conquest, H.C.
(twice).

Swallow, Daffodil, H.C.
(twice), A.M.

Swallow, Magnolia, H.C.

Swallow, Soulangiana,
A.M. (twice), H.C.

Thora (late English
crossing).

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS: Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points of Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS": Available free on request.

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Orchid Specialists in Australia

37 Dobroyd Parade, Haberfield (Sydney), N.S.W., Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2531

Australian Orchid Review



JUNE, 1960

VOLUME 25

No. 2

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Editorial	60
Significance of Dividing Cymbidiums in Late Summer	61
Interesting Correspondence	64
Worth Observing	65
Care and Cultivation of Cymbidium— <i>S. G. Cooke</i>	66
Vandas are Hard to Grow— <i>Capt. H. G. Mills</i>	68
Snails and Slugs— <i>H. J. Cann</i>	70
Conversation Piece	75
Why Cymbidiums Need Feeding— <i>Bert Schwartz</i>	76
Orchid Export Booming	77
Culture Notes from Tasmania— <i>F. W. Chilvers</i>	78
O.S.N.S.W. Winter Show	78
Hardwood Dendrobiums— <i>B. Bonnyman</i>	79
An Effective Orchid Display— <i>A. Birdsall</i>	80
General Hints on Bush and Glasshouse Culture— <i>N. Kelty</i>	81
Society News	82-85

ILLUSTRATIONS

Vanda Onomea	71
Cymbidium Prince Charles	71
Cymbidium Santa Fee	71
Snails and Slugs	72
Epiphytes	73
Bulbophyllum Macranthum	73
Macodes Pulcherrima	74
Oncidium Zebrinum	74
Dendrobium Thyrsiflorum	Front Cover

Editorial Committee: G. Hermon Slade, A. B. Porter, A. R. Persson, J. C. Davis.

Please address all Editorial Matters to:

G. HERMON SLADE, Box 13, Homebush, N.S.W.

Associates

QUEENSLAND:

P. G. Cran
Francis Tce.,
Taringa

VICTORIA

J. N. Rentoul
43 Denman Avenue
Glen Iris, S.E.6.

SOUTH AUSTRALIA

W. Harris
17 Old Belair Rd.,
Mitcham

WESTERN AUSTRALIA

A. C. Dawson
17 Alness St.,
Applecross

TASMANIA

F. W. Chilvers
1 Lassuade Ave.
Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.

Editorial

• It is generally conceded that the Orchid Genus which has made the greatest advances in recent years in hybridising and culture is the Cymbidium. A universal interest has been shown in all countries where orchids command appreciation, excepting countries within the tropics or adjacent thereto.

Methods of culture have been overhauled and experimented with until it could be truly said it would be difficult to think up anything new. Yet an entirely new concept in culture as regards correct time for dividing or repotting these plants has been developed in Sydney and surrounding areas.

The time honoured dictum has been to repot in the spring after the completion of the flowering season, say, Sept./Oct. The new idea, now proving to be eminently successful is to perform this operation in late summer Feb./March.

We believe this discovery to be the most outstanding event of this century cymbidium-wise.

This issue features the opinions and experiences of two or three leading growers. We invite our readers to study these contributions closely.

The export of Cymbidium flowers last season shows a commendable increase of 25 per cent compared with 1958, yet many growers complained that the exporters showed lessened interest in their blooms. The explanation may be that the exporters are becoming more selective or choosy. Exporters may have discovered that it simply does not pay to send a flower overseas unless it is of a quality that will fetch in America 50 cents at least.

Any questions? Orchid growers, especially the newer members of the Orchid fraternity, may be expected to come up against some problem occasionally which seems baffling. If you send us full details of your problem we will endeavour to find a solution. Your query and our reply will be published in the next issue.

If this service should attract sufficient interest we hope to establish a permanent panel of experienced growers who would be happy to make time and knowledge available to demolish such obstacles to successful Orchid culture.

Commencement is being made in this issue.

When this issue reaches our readers the numerous Winter Shows will be close upon us. Although these Shows are less elaborately conceived they deserve every encouragement. They are the opportunity to bring before the public the great variety of Orchids which can be grown mainly in the eastern and southern areas of Australia.

In rapid succession follows the large number of Spring Shows. By common consent, the time chosen for these latter coincides with the main Cymbidium season when relatively few miscellaneous Orchids are in bloom. By necessity it becomes Cymbidium Shows in the main.

Since the earliest times of Cymbidium growing the plants have been grown in terracotta pots. The accent has been larger and ever larger pots for relatively small plants. We invite our readers' attention to Mrs. Rhoda M. Berne's article in this issue. The technique to plant a small seedling into an 8in. pot is breaking new ground significantly.

Another development in pots merits closer study. It is becoming increasingly common to observe the use of cement pots, in the larger sizes, instead of the ordinary terracotta pots. *We invite our readers to tell us their experiences and preferences in their use of cement pots.* What drawbacks, if any. As the cement pot can be manufactured practically anywhere without the costly investment of kilns it should prove exciting to growers in the country. The transport of terracotta pots is necessarily costly and risky in freight, packing and breakage.

The Significance of Dividing Cymbidium Plants During Late Summer

Practical Growers' Discovery

DIVIDING CYMBIDIUM PLANTS IN FEBRUARY

A. B. Porter writes:—

• For many years the traditional repotting time for Cymbidiums has been immediately after flowering, except perhaps the early flowering varieties, which were often left till spring. The result has been that most Australian orchid growers repot their Cymbidiums in September or early October.

Some years ago I had some small plants, back-bulb propagations and seedlings, which had made nice strong new growths during the summer and looked much too vigorous to be left any longer in their small pots. When they started to bulb up about the end of February, I decided to repot a few into bigger pots then and there and see what happened.

When I took these young plants out of their pots and shook out the compost I found very active root growths, not only on the ends of the larger roots but also as new roots initiating from the base of the new lead. Now this surprised me at first as I had thought of a plant at this time entering its dormant period. But then I thought again, and realised that there was nothing surprising about it at all.

Have you ever noticed what happens when the new growth of a Dendrobium or a Cattleya is swelling into a pseudo-bulb? A crop of new roots emerges from the base where the lead comes from the rhizome and before the plant becomes dormant, regardless of whether it flowers then or later, these new roots have grown right through the compost. Also, the best time to repot a Dendrobium or a Cattleya is when these new roots are just beginning so that they grow down into the new compost before the plant goes to rest.

Why should not the same apply to a Cymbidium? This thought gave me some comfort as to the outcome of the experiment and over the years since then experience has proved that repotting Cymbidiums at end of summer or beginning of autumn is a complete success. I recommend the period from mid-February to mid-March as the best time, but I have run on into April without any apparent harm.

I talked this idea over with Mr. Cecil Cam-bourn and found that he had been doing the same thing. Later he told me he had tried breaking up adult plants at the same time of year with complete success, and we have been doing it every year since.

Mr. Leo Giles is another advocate of February-March potting, but he was led to try it by an accident. A pot of Cymbidium in his collection was accidentally broken in early autumn and when he repotted the plant he noticed the active root growth and the new roots from the leads. The contrast between this condition and the inactive roots often seen when repotting in spring struck a spark and created an idea. So it was some time later, in the course of a telephone conversation, Leo and I found that in totally different ways we had both come to the same conclusion—that autumn potting is the thing.

So it began. It matters not if the plant is already carrying flower spikes, as they often are at that time of the year. You still get your spikes and, more important still, the plant will flower again the following year.

Breaking up and repotting immediately after flowering often causes shrinkage of the bulbs because in many hybrids there is not active root action before December (the first month of summer). For this reason the new leads have to rely on the bulbs for nourishment and, if the plant is broken up at this time, late development of the leads will result, followed by lack of flowering in the following season.

When the plants are broken up in early autumn the roots are growing freely, and the roots just forming on the new leads will quickly grow down through the compost and establish the plant in its new home. By late autumn the new leads will have developed into fat, healthy bulbs and the flower spike will develop without a check.

Certain varieties of Cymbidium, especially green flowering varieties, are notorious for the way the bulbs shrivel when the plant is broken up and repotted. I have often heard growers say that they repot these types in early autumn because this minimises the shrivelling. The idea seems to be that there is something about

the greens that makes them fit subjects for autumn potting.

Not so! All *Cymbidiums* are fit subjects for autumn potting. The position is that some of the greens and other varieties which tend to show resentment at disturbances are less *tolerant* of spring potting. All varieties respond to autumn potting—some varieties *tolerate* spring potting.

This may sound revolutionary, but it is based on quite a number of years of observation and there is not the slightest doubt in my mind that February-March is the best time of the year for repotting *Cymbidiums* in New South Wales.

Perhaps some growers in other Australian States or overseas countries have tried this technique. If so, I would be pleased to hear from them and arrange publication of their views in this Journal.

If you have not tried it, try a few plants next autumn and watch results for yourself.

—14 Henderson St., Eastwood, N.S.W.

Rhoda M. Berne writes:—

• When I first acquired a small collection of *Cymbidiums* in 1951 I had no one to advise me when to pot and, as it happened, I did not do so or divide the plants—many of which were pot bound—until February. When I did this I was told that this was the wrong time to do so and that I would lose all flower spikes and probably also many of the plants themselves. However, to everyone's surprise the result was a very good flowering and also the plants seemed to thrive particularly well, even those which had then been divided—and plants which I was told were very shy flowerers and had not bloomed for some years all had spikes. At first I put this down to the fact that my particular locality seemed to suit *Cymbidiums* naturally, situated as it is on the boundaries of Kuring-gai Chase, ideally protected from all adverse winds such as the westerlies and southerlies while yet not so far away from the sea that we would fail to get sea breezes. Before going in for *Cymbidiums* we grew many kinds of flowers and ornamental trees and after several years I found that certain shrubs, etc., naturally liked soil, climate and locality, while others such as deodars and spruce had to be coddled and, despite every attention, did not grow at all well. The result being that eventually I grew only those types which were suited to my particular soil and locality.

So far as orchids are concerned, my bush houses at all times of the year gave the plants the very maximum of sun and fresh air—there being no glass whatever and the only overhead cover being $2\frac{1}{2}$ x 1 in. battens, spaced about 8 inches apart. It was subsequently proved that this was ideal for all seasons of the year and sufficient protection from the sun, even during heatwaves, while in winter time it prevented the heavy frosts, which we often get here, from settling on the plants and my experience has been that while *Cymbidiums* like abundant sun and fresh air they also like to feel the cold bite of frosty, wintry mornings, especially the greens. In our locality *Cymbidiums* do not require any artificial aids such as glass or heat—and it is due to this fact that I haven't bothered about any other genera of orchid than *Cymbidiums*. Many other genera do not thrive naturally around Sydney and have to be coddled and this includes *Cypripediums* which require a glass house plus artificial heat during winter. The sole exception is a *Cattleya* given to me and which also has the unusual fact for this class of orchid that the blooms remain in good shape for eight weeks.

During succeeding years I found that despite every effort to pot and divide my *Cymbidiums* at the conventional time, viz. immediately after they had flowered, I had so many other jobs to attend to that it was not until February that I was able to divide and pot many of them, and it was not until the last two years that I became convinced that the month of February was the ideal time, under my conditions, to do so if I was to get the maximum results so far as flowers and growing results of the bulbs themselves were concerned.

Those plants which had been potted and/or divided during this month produced better results in every respect than those potted earlier.

I am not, of course, a botanist, nor chemist and while I have read all the various periodicals and magazines on the subject the only result has been that I have been dazzled with science. I have had to rely upon my own experience of what to do if I was to get the best results. It appears to me that there are many reasons why February is the ideal month of the year to pot and/or divide. In fact, several varieties seem to resent being broken up at the conventional time, say, September, especially the greens, so much so that it is not uncommon to lose a plant which has been cut in spring and to attribute the loss to black rot, whereas, in

fact, the bulbs have lost their resistance by being exhausted from the flowering just then finished.

Bearing in mind that I think, generally speaking, it is unwise to divide a pot into less than three bulbs, i.e., green swinger, a good bulb and one or two leads. The advantage of dividing in February is that by the following season the plant has strong roots to send up flower spikes, especially the shy flowerers, which will only bloom if there are ample bulbs and growths. Take care not to injure the young flower spike then often to be found near the bottom of a bulb. These young spikes would probably not have been there if the plant had been divided at the conventional time, viz., September. Especially is this the case with greens, the bulbs of which tend to wither upon being broken up. This does not occur if such plant is divided in February. While with shy flowerers no flower spike at all would be produced if the plant had been broken up earlier.

If I had a small collection of no more than 300 pots, this, as far as I am concerned, would be a counsel of perfection. However, this ideal cannot be achieved by me with a larger collection, because with a few thousand pots to divide one has to get on the job as soon as they have flowered if all are to be done by the end of February, which is the latest that it should be performed. After February there are still a few growing months ahead for the plant when divided. During the growing season I find that the plants have to be regularly watered and fertilised. In this connection I have been guided by Mr. Leo Giles' advice, although I do not use the same compost or basic fertiliser as he does. I apply the fertiliser, which in my case is Foliage, by means of a Little Boy or Big Boy spray, and latterly by George C. Warner's very excellent Garden King Spray applied to the foliage of the plants once a month. So far as seedlings are concerned I have read a lot about the American claims as to how quickly they are able to bloom their seedlings. Mr. Leo Giles has wonderful results as regards quick flowering of seedlings. He is able by the end of 2½ to 3 years from flask to have sufficient number of a particular cross flowered to be able to form a fair opinion of what the cross is likely to turn out to be. By following season the majority of the cross will have flowered. I have also had exactly the same results although in my case *I put the seedlings into 8 inch pots and do not disturb them until they have flowered* as I find that my particular potting mixture

does not break down until then. I doubt very much whether any other grower, in a glass house or not, can do better than this.

Provided that one has the "know how" my own experience is that Cymbidiums are the easiest and most rewarding, I don't mean necessarily in the financial sense of the word, of all flowers to grow simply because it would appear that they delight in the climate of Sydney—freedom from smog and the proximity to the sea.

The Sydney water supply seems particularly good. The pH value of my compost is 6, perhaps I should also mention, as a matter of general interest to all Cymbidium growers, the wonderful new fertiliser known as the "Harold Darke Fertiliser". I had used previously with success a monthly spraying of the foliage with "Foliage" in liquid form and also of Nitrophoska in liquid form to the foliage. Some months ago I was asked to try George C. Warner's new fertiliser, the "Harold Darke Special", which then had proved such a success with the lawns required by bowling clubs. After giving this a fair trial I am now convinced that their expectations that this would prove to be the perfect fertiliser has been amply borne out by my own experiments. The effect on the root growth of Cymbidiums and also on my Zygopetalum has been nothing short of remarkable.

The necessary elements for growth include a great variety of trace elements. I apply it in liquid form on to the foliage by either one of the three sprayers I have mentioned. This, of course, is in addition to the basic fertiliser used as part of the compost.

Although I spray monthly, with the "Harold Darke Special", my established and large pots, I do so every fortnight with the very small seedlings. In all cases I do not fertilise any plant during the non-growing season, viz., between the months of May and the beginning of September, the reason being that the amount of fertiliser one gives to any plant depends upon the number of hours per day of sunlight, which in turn determines the activity of the plants.

To sum up I find that although the ideal time for potting and/or subdividing is February this is not always possible with a large collection. The advantages of then doing so are:—(a) After flowering a plant requires a certain amount of time, at least one month, to recuperate, the bulbs to send out new roots and growths as well as spikes and by February one

should have a healthy plant in prime condition in every respect and ready to subdivide without retarding its growth.

(b) One avoids the risk of the plant dying either from the setback or of what is usually assumed to be black rot and there is then no risk of the bulbs of the green varieties shrivelling, as often occurs if divided at what is regarded as the conventional time, i.e., just after flowering.

Personally, my experience has not shown me any disadvantage or reason why I should not

wait until February to do so. On the contrary, there seems to be every advantage and reason why I should so wait. After all, there is even at this stage still a couple of months of growing season left for the divided plant to keep on growing. I have found that in no case has the divided plant or flower spike or root system been retarded—in fact, they all keep growing as though the plant had never been divided. This is especially important in the case of shy flowerers which will only bloom from a plant which has a considerable number of green bulbs.

—Telopia St., Mt. Colah, N.S.W.

INTERESTING CORRESPONDENCE

G. Hermon Slade

• The difference between fantasy and facts can be as narrow as it can be wide. Sometimes what we believe must be fact reveals that not only was it fantasy, but that our imagination was so widely different from our beliefs that the gulf becomes a story in itself.

Mr. G. C. K. Dunsterville has agreed to the publication of his letter telling the story of *Oncidium zebrinum* in its natural habitat. It answered my letter to him and amply shows the importance of checking our thoughts and differentiating between theory and reality.

Dear Mr. Dunsterville,

Last week-end when York Meredith and I were looking over my collection of orchids, he mentioned that it was from you that he obtained the plant of *Oncidium zebrinum*. When we were looking at it we wished you could see the fine specimen that your plant has become. Hardly any orchid in my collection has grown with the vigour and determination of your *O. zebrinum*. It has been planted on to a four feet long thin piece of tree fern fibre which it has covered in foliage in a most attractive manner. The plant this spring is a mass of new roots and growths. I think there would be at least fifteen new leads surmounting a very attractive arrangement of foliage and pseudo-bulbs. It is a plant that has a mind of its own, for I have not been able to train its scandent habit from other than complete vertical growth. However, it has produced a specimen which has delighted

me. Last year in an attempt to make it flower I placed a piece in a much more exposed situation with a set of Brazilian *Oncidiums*, including *O. varicosum* and *O. crispum*. Although the plant resists sunlight effectively, its leaves were rather damaged by wind so that the plant had a rather pathetic appearance compared with the serene aspect of the plant under a lath house which I mentioned earlier.

I am glad to say, however, that the plant outside with the waifish appearance has developed a strong flower spike which is already over six feet and is lengthening daily. I have now brought the plant into more protected conditions to enable it to come to bloom.

Surely this *Oncidium* must be an epiphyte of extreme type which, growing three feet directly vertically, must reach the top of the forest trees. How does it begin? Half way down?

With kind regards,

Yours sincerely,

G. HERMON SLADE.

Mr. G. Hermon Slade,
Homebush, N.S.W.

Dear Mr. Slade,

I very greatly appreciate your kindness and trouble in writing to tell me of the progress of the *Oncidium zebrinum* that I sent to York Meredith several years ago, and it is nice to hear that it is flourishing so far from its native land. I expect the poor thing is a bit worried at finding its seasons all inside out and it will

be interesting to see if it remains with Nov./Dec. or continues to change slowly . . . its season for flowering here is August/September.

When flowering well, with 50 to 100 flowers at the end of a spike several yards long, it is really quite spectacular and I am surprised that it is not an orchid of greater renown in the horticultural world. It does, of course, take up a lot of room, which detracts from it where limited space is available, and while it is a strong grower it is not easy to flower, as you have already noticed. In the hills above Caracas it grows extremely prolifically at about 4000-5000ft. elevation, in light forest where the floor is covered with grass or other vegetation. Here it creeps all over the place, more as a terrestrial than an epiphyte, and only rarely decides to climb a yard or two up a tree. From this lowly position it sends its flower spike twisting its way up through the trees, reaching for the higher light intensity above, and the spikes consequently sometimes reach great lengths, although only the last three to five feet bear branchlets of flowers. By contrast, one will sometimes find a plant that flowers with its spikes crawling around at ground level, but this is very much the exception.

I am most interested that you have got your plant to start a flower spike by treating it rough: yet another example of the fact that by treating an obstinate orchid roughly you can sometimes get it going (provided the plant is vegetatively strong enough to take some hard knocks) . . . scare the daylight out of such a plant and it will decide that if death is round the corner it had better hurry up and produce flowers so as to generate seed. Here in its native habitat it is equally not an easy flowerer. In a number of places it grows in great profusion, but with no flower spikes visible, old or new. Life seems to be so easy for it, expanding vegetatively year by year, that it has no need of flowers to keep its numbers increasing. Generally it is only those plants growing near the upper limit of its altitudinal range that flower, presumably because it is growing in a place where the nights are cold enough to worry it a bit (i.e., to cause the necessary change in auxin/gibberellin balance, or whatever it is that produces flowers). Assuming that the night temperature is lower in the more exposed position you gave your plant, this might well have been an important factor in its flowering, as well as the general scare you gave it.

We are building ourselves a new house just outside Caracas, at about 4250ft. elevation,

where our grounds include quite a chunk of wooded ravine with *O. zebrinum* crawling all over the floor. There is no evidence that any of it has ever flowered and when we are living out there we shall have an interesting time seeing what we can do about it.

Yours sincerely,

G. C. K. Dunsterville.

P.S. There is another *Oncidium* here, *O. falcipetalum*, which vegetatively is quite indistinguishable from *O. zebrinum*; its habitat overlaps that of *O. zebrinum*, though normally growing rather higher up. I find on checking my back correspondence with Meredith that I sent him specimens of both *Oncidium*s in the same small parcel and that the labels got separated from the plants in Australian quarantine. As the plants are so very close in appearance it may be that you have only a 50/50 chance of finding that your *O.* is, in fact *O. zebrinum*. However, while *O. falcipetalum* is not quite so eye-catching as *O. zebrinum* it is still a very worthwhile plant as you will see from the enclosed colour transparency (which rather exaggerates the redness of the honey-brown colour). The other transparency is of *O. zebrinum* for comparison; you may keep both. For your interest I am also enclosing copies of my drawings of these two orchids, which you may also keep. The one of *O. falcipetalum* appears in Volume One of my Venezuelan Orchids Illustrated, which is due to reach the bookstores at the end of this month, and the other should appear in Volume Two if I don't lose my shirt over Vol. 1 and have to call off any further efforts . . . I hope not, as I have the second set of 200 drawings all ready to go.

WORTH OBSERVING

Indigenous and Exotic

- The word *exotic* is often used to mean bizarre, unusual; this is incorrect as the word means "from another part of the world"; it is thus the antithesis of *indigenous*.

It is thus correct for us to say in Australia: "The quaint Platypus is an *indigenous* animal, but the common Starling is an *exotic* bird, which was introduced from England."

Most cultivated orchids happen to be exotics; but the word "exotic" does not literally imply anything exceptional about the appearance of the plants or flowers; other than that they are of foreign origin.

The Care and Cultivation of Flowering Sized Cymbidium Plants

Reprinted from A.O.R. June, 1957 (now out of print) with additions by the author.

S. G. COOKE

• When a Cymbidium seedling has reached the flowering stage, it is a mature plant and is ready to show the grower its beauty.

Having displayed the qualities it possesses, a decision must be made as to whether or not it is worthy of retention in the collection. If the blooms are unsuitable for the show bench, or are not of exportable quality, it is then advisable to dispose of the plant. Mediocre types demand as much attention as the quality group.

To make ready for the growing season that is to follow, all potting must be done as early as possible, therefore the grower must have the necessary number of pots crocked ready for use.

Crocking of Pots. Firstly, a large concave crock, or a metal "Easyrock" must be placed over the drainage hole, the last mentioned being quite suitable and easily obtainable. All crocks should be graded to obtain two sizes, using a half-inch sieve to separate. Having done this, the large pieces are then placed in position and finally a covering of the smaller ones. The crocks, by then, should have filled the pot to approximately one-third of its depth. If this method is used, the grower will find that he will very rarely, if ever, have a drainage hole blocked with silt.

Compost. Most growers have their own special ingredients for Cymbidium mixture, therefore, opinions on same vary greatly, nevertheless Cymbidiums will grow in almost any open medium. Undoubtedly, my manuring programme will cause many to raise their eyebrows, especially those who condemn the use of manures and fertilizers. However, I have used this method for a considerable time and am quite happy to continue doing so. To those people who feel that they would like to give this manuring programme a trial, I say, "Go ahead! Your plants will relish the treatment and the growth in the ensuing year will more than please." The plants in turn will show appreciation by rewarding the grower with blooms that have improved in both size and texture.

Potting Medium. Two buckets of coarse, new tan bark. One bucket of tan bark, one year

old, sieved to remove fine particles. One bucket of slightly decayed bush leaves. Half bucket of fresh poultry manure (*not* poultry humus). Three-quarters bucket of coarse crushed sandstone.

If coarse sandstone is not available, Nepean River sand can be used as a substitute, but the latter is devoid of nourishment, whereas the sandstone contains minerals and trace elements.

Preparation of compost months ahead of potting time is not at all necessary. This mixture may be used immediately and, if necessary, should be dampened (not saturated) before use.

Potting On. Potting on means taking a plant out of the pot and repotting it in a larger one. It is my practice to put the plant into a fresh mixture, rather than use the old, which has usually broken down to a great extent. Cymbidium roots revel in the open, airy compost, consequently the grower will have very little trouble with black or brown rot after the new mixture is used.

In using the old mixture, it is to be remembered that the plant may have to go through a long, cold winter some months after potting, and a sour, soggy compost could very easily lead to black rot, which starts in the roots and moves to the base of the pseudo-bulb and ends its run with a complete collapse of the plant.

Dividing of Plants. Before commencing to break a plant, the grower must have clean, sharp cutting instruments in readiness, and these should be standing in a diluted solution of Zephirin concentrate, to sterilize. A sealer should also be on hand, a suitable one being Stockholm tar, which will both seal and disinfect a fresh cut. A small brush may be used to apply the sealer.

A good grower will endeavour to have all plants which are not going to flower repotted before the end of July. This will enable him to concentrate on other plants as the flowering of each ends. Early potting also gives the plants a good start and a longer growing season. It is also my practice to break up and repot greens, when not flowering, in May or June. This will definitely stop shrivel in the pseudo-bulb.

The set-back, which is so noticeable in greens, will then not be in evidence. If a green is in spike, it is then advisable to delay the operation until February.

Having taken a plant from the pot, the compost can be shaken away, care being taken that damage to the root system is kept at a minimum. First of all, the dead, unhealthy and damaged roots must be cut away. This will enable the division to separate more freely when the cut is made.

Next, all back bulbs should be taken off, either by cutting, or by twisting to the right, then to the left, again removing any roots that may have been left behind.

If a cutting instrument has been used, it should be placed once more in the Zephrin solution. The back bulbs can be used for the propagation of new plants. Had they been left on the plant, they would have been neither useful nor ornamental. In the event of the plant being larger than desired, a further cut or break may be made, although it is advisable to keep divisions fairly large, say, three or four bulbs. This will ensure a good flowering for the following season. All cuts must be sealed and the divisions placed in the new mixture immediately. Lengthy exposure will do harm to the root system. The newly potted divisions can be lightly watered to settle them, then placed in a cool glass or bush house, for approximately one week, and from there to their growing positions.

Crowding of plants on the benches is unwise. Cymbidiums will grow more profusely and better growths will result if they are given ample space and an even distribution of sunlight.

Newly potted plants require very little water until they have begun to make new root tips, after which the water supply should be gradually increased. In the hot summer months the water should be poured in and the compost must never be allowed to dry out. It has been said that heavy watering will leach the nutriment from the compost. This may be true but, at the same time, heavy watering carries the fine particles of silt through the crocks and out of the drainage opening. The all-important oxygen follows the water through the compost and no souring could possibly result. To replace the plant food that has been lost in the watering, spread a large handful of fresh poultry manure around the top of the compost of a ten-inch pot, followed by a covering of new sieved tan bark, after which plants are given a good watering.

This operation can firstly be carried out early in December, repeated in February, and again in April. The plants will respond to this treatment in no uncertain manner, and the root system of each one will be strong and vigorous and will not be carrying any that are dead or decayed.

Shading of Cymbidiums is of great importance. They should be heavily shaded from mid-November to mid-February, after which some of the shading can be taken off, and a further thinning out in April.

In using the above-mentioned method for the first season, a grower may find that he is a little disappointed with the percentage of plants flowering, but his compensation will be in the fact that the build up of the plants is remarkable; but in the following season he should, with the same amount of shading, flower 95 per cent of his mature plants.

He will then be in the position of having a beautiful display of Cymbidiums from which he can choose, and be proud for them to grace the show bench.

It has been my opinion, for some considerable time, that the pots obtainable at present are not designed to suit the well-being of the Cymbidiums, particularly the varieties which are not vigorous in growth, and which invariably have a weak root system. With these weaker types, a souring of the compost is often noticed at the bottom of the pot when the plant is turned out—resulting in dead and diseased roots.

With Cymbidiums, the tendency is for the roots to travel around the pot, rather than into its depth.

I would much rather have a pot with a greater diameter and less depth—say, two inches less depth and perhaps one inch wider. This would also save time, work and crocking material.

My pots contain three or four inches of crocks, to lessen the depth, in an effort to counteract any tendency to sour.

This change in design is worth some thought!

When making up my compost for last year's repotting, I used the same ingredients as previously published, plus an extra half-bucket of poultry manure, an extra half-bucket of sand and, in addition, two buckets of peat moss. I now find that the compost does not dry out as quickly and the growth, if anything, has improved.

—62 Castle St., Blakehurst, N.S.W.

Vandas Are Hard To Grow

Capt. H. G. MILLS

• This seems like a strange heading to an article of this nature, but it is very true UNLESS:—

The three types of Vandas will be discussed herein. Terete, Semi-Terete and Strapleaf. The Terete and Strapleaf are species or hybrids of like species, while the Semi-Terete is a hybrid of the two species, Terete and Strapleaf, or a hybrid raised from such hybrids. Fortunately the three types demand similar treatment and will grow and flower under the same conditions, but each will do a little more for the grower if a slight variance of the treatment is made for each.

Conditions under which Vandas should be grown include the following, but remembering at all times that the extremes will do damage to your plants and must be avoided. Temperature range is from 50°F to 115°F with 60° to 95° the desired condition.

Humidity should not be below 40 per cent.

Light should be as explained in a later paragraph.

To obtain this range of conditions, in my district, it is necessary to have a conventional type glass house, which is by no means airtight, but which can be closed sufficiently to keep out wind and rain when required. This should be adequately drained and situated in an east-west direction with the door at the east end. Being conventional it will have roof and side vents, and possibly ground level vents. As the nature of this genus is to grow tall, it is an advantage to have glass sides to ground level rather than part glass and part brick, concrete, stone, etc.

Having reached the stage where a residence has been provided for your plants it now becomes necessary to paint and furnish it and supply it with utilities. Water must be laid on, with the tap, with hose fitting, just inside the door. Electric power is also a must, with sufficient lights for normal illumination and at least two power points.

A well constructed conventional glass house would have a temperature, with all ventilators and doors closed on a sunny winter day, of 110°, while in summer 140° would be easily reached. Therefore, some protection from the sun is required. For spring, summer and early autumn, it is necessary to apply a coat of good white paint, but put it on badly and unevenly

in September. This will weaken with sun and rain and partly wash off, and by February would require repainting if the heat were going to continue. However, as the sun has commenced its northward journey again, and will continue to become less intense, this lighter covering will allow more winter sun to warm up the house on the cooler winter days. Then the cycle will commence again in September. When applying the paint a good guide is to have about 30 per cent of the glass so that you can barely stand to look directly at the sun through it, and the balance so that you can look at the sun comfortably through it; a somewhat mottled effect.

Now for some furniture. With Vandas this presents a problem, because you may easily have plants 2in. tall and others 7ft. tall, and others at all heights in between. Some bench space is, of course, essential, as you will always have small plants, also plants of other genera without the sky-reaching habit of Vandas. However, as this article is confined to Vandas you would be well advised to have a bench along the north side of the house for seedlings and other small plants, and just floor space on the south side.

As most well furnished homes have a floor covering so we must also consider something on the floor of our glass house, firstly to assist in drainage and secondly to assist in supplying humidity. Ordinary coke ashes, with a high percentage of large clinkers the size of a man's fist, are very suitable. Blue metal, were it not so expensive, would be ideal. As our plant residence is now completed, and ready for warm weather use, we can assemble our plants.

Much has been said about pots, potting and potting media, with reference to Vandas and you, too, will probably develop a preference in each of these subjects. Suffice it, therefore, to say that it matters not whether you use slotted or unslotted pots, plastic, cement or terra cotta pots, or whether you tie your plants to a slab of tree fern.

Should you use pots and large lumps of charcoal, or large lumps of crock, or a combination of both, or should you use tree fern and charcoal, or crock and tree fern (shredded or lumps), or crock, charcoal and tree fern, or crock, charcoal and a little old sieved tan bark, or straight blue metal (size depending on age

and size of plant), or some other material, your Vandas will grow well for you if your glass house conditions are right.

The structure of this genus is such that there is no moisture storage for the plant to draw upon in dry conditions; therefore, it is essential that regular watering be maintained and a minimum of 40 per cent humidity is aimed at. As your potting media will allow almost instant drainage, it will become necessary in hot dry weather to water more than once per day. This point will become obvious when you consider how many roots grow in air alone.

As there is usually no way of getting powdered plant food to the roots of this genus, almost the only way one can fertilize the plants is by a foliar spray, and this should be carried out regularly every second week during the late spring, summer and early autumn growing period, and every third or fourth week during the remainder of the year, depending on how much light your glass house receives at this time of the year. All fertilizers should be used at half advertised strength and only after plants have been given one of their regular waterings. Using half strength will prevent too rapid and lanky growth. Any well-known commercial fertilizer is suitable, as is also liquid manure, very dilute, made from cow or chicken manure.

Vandas will harbour and be attacked by the same insect enemies and fungi that any other garden plant is troubled by, and regular spraying with insecticides and fungicides, such as Capthion, is necessary. Slugs and snails must also be controlled, as these are very damaging to both roots and flower spikes. If your present system for preventing these destroyers is not too effective, you may like to try dusting the whole plant with metaldehyde. It works very well, but must be carried out regularly.

The three types of Vandas, as well as varying in appearance, also vary in the amount of light they require. As I said earlier, a little variance in the treatment of the three types will reward the grower. This refers to light. The Strapleaf requires the least light, while the Semi-Terete will take 10 per cent more and the Terete 20 per cent more. Too much light will burn the Strapleaf, while too much shade will cause the Semi-Terete and Terete to grow too spindly and, more important, they will flower very irregularly and sometimes not at all. Place the plants in an east-west direction; that is, with one leaf tip pointing east and the other to the west, and make sure they are well

staked if over 12in. high, as they will grow very tall, and once a tall Vanda begins to lean it will grow into a very crooked plant. This is particularly applicable to Teretes and Semi-Teretes.

Complete success with Vandas is impossible without an adequate knowledge of the condition inside and outside your glass house at all times of the year by day as well as at night. To assist you to become familiar with your local conditions of temperature and humidity, you will require one "wet and dry bulb" thermometer (Hygrometer), at least one "maximum-minimum" thermometer and several ordinary tube type thermometers. These articles will enable you to study closely how hot and cold your glass house gets; how much moisture content you have or, more important, have not, in your house, and how efficient your heating and circulatory system is. Three thermometers in the average glass house, with heaters operating, will give a temperature spread of up to 15° and enable you to locate the hot and cold spots.

To heat your glass house you will find many systems varying in degrees of cost, efficiency and reliability. In a small house electricity is by far the best form of power. It is usually a little less expensive to install, a little more expensive in operating cost; but once set up your worries of unreliability and failure are almost ended. I recommend one, or more, electric convection room heaters, thermostatically controlled, and an ordinary room or office table type fan being operated by a manual on-off switch. This fan should be operated every night, winter and summer, as soon as your glass house door is closed, to provide a regular movement of air at all times and to ensure an equal distribution of heat when heaters are operating, and so eliminate, as much as possible, all hot and cold spots.

It is most important that proper ventilation be maintained at all times, and the hotter the weather the more important this becomes. Proper ventilation is not just a matter of opening every vent and letting the breeze blow at will through your house. By doing this you would lose all the humidity your watering had supplied in just a few gusts of wind. The conventional glass house has overlapping panes of glass which are not sealed and consequently allow a circulation of air which will pass the greatest distance through your house; such as having the door open two inches and the roof vent at the other end of the house open three or four

Continued on page 70

"Snails and Slugs"

H. J. CANN

• Heavy rains in the autumn and winter often stimulate the development of unusually large populations of snails and slugs, and damage to orchids and flower gardens is frequently reported.

Both the common brown snail (*Helix aspersa*) and the black slug (*Limax sp.*) belong to the class *Gastropoda* which includes such related animals as oysters and mussels. These creatures are all hermaphrodites and each individual is capable of laying eggs.

A very small snail, less than a $\frac{1}{4}$ inch in diameter, has in recent years been reported as eating the roots and leaves of pot plants. This snail often forms large colonies amongst the crocks at the bottom of a pot. Being small and a night feeder, it is not easily observed, but it can do a lot of damage. It is known as *Cochliella acuta* and is an introduction to this State from Western Australia, South Australia or Tasmania.

Snails and slugs remain in a dormant condition during dry periods, but following the onset of showery weather become active and move out in search of food on dull wet days or at night.

Their spherical whitish eggs are laid in clusters of about 40, an inch or so below the soil surface. On hatching, the young snails are fragile, creamy or light brown in colour and resemble the adults.

Snails and slugs are long lived and take about six months to reach maturity.

Continued from page 69

inches, or with the door and all side vents closed. Open the roof vents one or two inches and this will cause warm air to flow out of the top vents and allow outside air to enter through the glass laps. In winter, when heaters are necessary even by closing all vents, there is a considerable heat loss through the glass laps, and this sets up a small circulation. The fan helps considerably to keep the air inside the house moving when all vents and doors are closed.

From the above you will readily agree "Vandas are hard to grow." However, if you will give them firstly the correct housing and secondly the correct attention, you won't have to grow them, they will grow themselves.

—340 Woollooware Rd., Burraneer, N.S.W.

CONTROL

The elimination of breeding areas is an important first step in the control of these pests. Weedy areas, accumulations of rubbish such as tins, broken flower pots, old boxes, timber debris and rock piles are typical of the situations in which snails hibernate.

Measures to be adopted for control are dependent upon the circumstances in which the snails and slugs occur.

Each orchid grower must study his own conditions and try to adopt a method to suit them when he is spraying or putting out baits.

Any of the following methods, or combination of methods, may be used.

SPRAYS AND DUSTS

Bordeaux Mixture at the rate of 2:2:80 plus one gallon of white oil is a highly effective spray for preventing snail damage to plants. This method may be very suitable for use on garden plants and shrubs. This mixture will give some kill of young snails, if these are active at the time of application, but chiefly acts as a repellent preventing attack for many months after application. The addition of one ounce nicotine sulphate to each five gallons of Bordeaux Mixture improves the contact effect of the spray.

Copper oxychloride, being easier and quicker to prepare than Bordeaux Mixture, may be used instead.

Copper oxychloride should be used at the rate of one ounce to 2-3 gallons of water. Care should be taken that no spray could reach Cymbidium leaves or bulbs.

Most orchid growers would probably not care to use Bordeaux Mixture on their plants as this spray leaves a disfiguring residue on the leaves and may burn tender parts.

On the other hand, copper oxychloride leaves only a slight residue and is unlikely to damage tender foliage.

The sprays could be used on surrounding garden plants, lawns, fences, etc., to good advantage and would give protection to nearby orchids. The areas underneath benches, bench legs and slats could be sprayed with one of these sprays mentioned.

Spraying and dusting plants with an arsenical compound may be used to control snails and slugs. A spray of three ounces arsenate of



VANDA ONOMEA 'Eva Bonnyman'

H.C.C. 1959, 4½". Grower, Mr. Bert Bonnyman. Photo: Fred Moulen.



CYMBIDIUM PRINCE CHARLES 'Pinnacle'

4¾", cream with pink flush. Grower, Mr. Frank Slattery
Photo: Fred Moulen.



CYMBIDIUM SANTA FEE

1st flower from seedling, 4½". Light pink. Grower, Mr. L. Sasso.
Photo: Fred Moulen.



Above: Snails and slugs lay their eggs in clusters an inch or so under the soil. There are about 40 eggs in this cluster of snail eggs. These two photos supplied by the Department of Agriculture of N.S.W.



Left: When snails reach plague proportions they can do much damage overnight. Adult snails on the trunk of a citrus tree.

Left: EPIPHYTES

Epiphytes in their natural habitat in Bougainville. The trees and lianas are covered in epiphytic ferns, aroids, mosses and Orchids, creating a three dimensional wonderland of vegetation. Photo: G. H. Slade.



Below: BULBOPHYLLUM MACRANTHUM

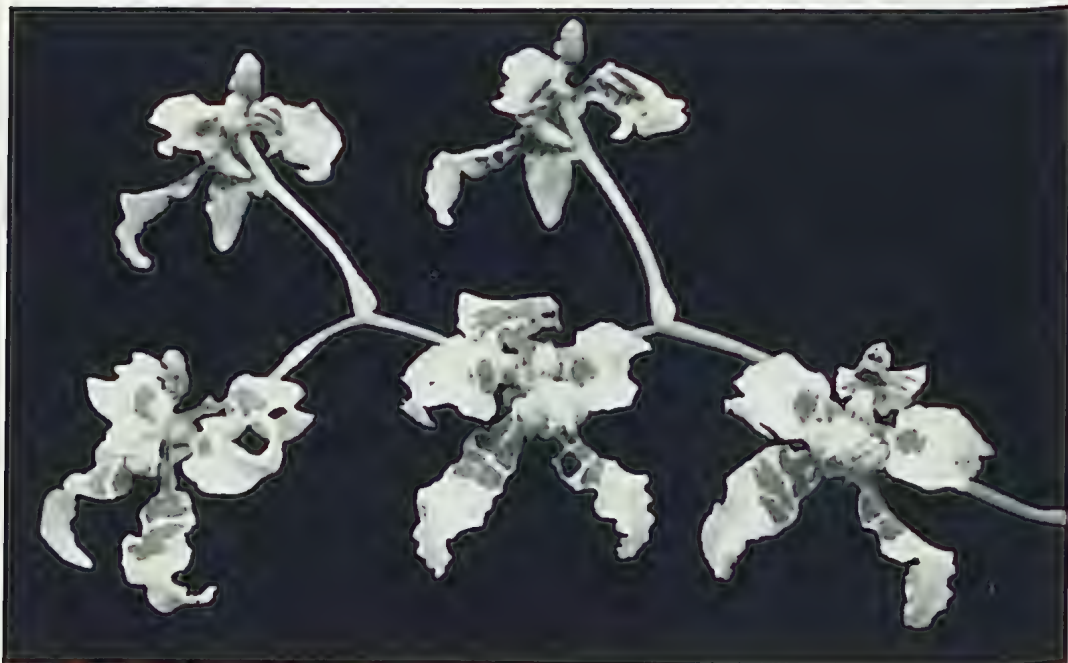
This curiously inverted flower attracts fruit flies by its fruity odour; as they crawl over the hinged labellum they are suddenly precipitated on to the stigmatic surface of the column thus effecting pollination. The flower is designed in purple lines and spots on a waxy white ground. Native of New Guinea. Photo: G. H. Slade.





MACODES PULCHERRIMA

This Jewel Orchid is featured in next issue by G. H. Slade in Bougainville, its Charm and Orchids.



ONCIDIUM ZEBRINUM

This remarkable Orchid with spikes several yards long is discussed on page 65.

lead powder in five gallons of water or, alternatively, a dust mixture of four ounces arsenic at of lead powder mixed with 1lb. hydrated lime or kaolin may be used.

Both the spray and the dust would leave a white residue on plants.

BAITS

Baits may be used effectively if scattered when snails or slugs are active.

Under garden conditions baits are generally mixed wet, but under glass and bush house conditions there is so much moisture about that baits can be mixed and scattered dry. They will absorb adequate moisture.

Dry baits can be made up in quantity and stored until required and this is a distinct advantage.

A bait consisting of

$\frac{1}{2}$ oz. of either Diazinon or Malathion wettable powder

$\frac{1}{3}$ oz. Metaldehyde (fine powdered)

1 lb. Bran

is considered to be the most effective bait for snails, slugs and slaters. Diazinon is preferred for slugs and Malathion for slaters. Metaldehyde is an attractant and also a poison. Baits are set out in small heaps.

Another Metaldehyde bait can be made up as follows:

Metaldehyde (fine powdered) $\frac{1}{3}$ oz.

Bran, 1 lb.

This should be set out in small heaps also.

An effective bait which is used dry and was developed originally for slug control in pastures is made up as follows:—

Metaldehyde—2 ozs.

BHC Powder (10%)— $1\frac{1}{2}$ ozs.

Pollard—6 lb.

These ingredients should be mixed thoroughly in the dry state and broadcast over the affected area towards nightfall. This is a very useful bait which will control crickets and cutworms in addition to slugs and snails.

Baits of a more permanent nature can be made according to the following formula supplied by Mr. K. S. Chan, Assistant Entomologist, North Borneo.

1 part by volume Metaldehyde Powder.

3 parts by volume Rice Bran, or Poultry Mash.

1 part by volume Hydrated Lime.

3 parts by volume Cement.

The ingredients should be mixed dry and water added to make a thick creamy mass and then allowed to set thoroughly in a shallow pan. Break into blocks about two inches square

by about $\frac{3}{4}$ inch thick, and place where snails occur, in the early evening. The advantage of these blocks is that they are durable and can be collected and used again and again when conditions for baiting are favourable.

If the blocks are to be left out permanently, they are best placed in small flower pots or tins lying on their sides to protect them from rain.

When large areas, such as orchards or large gardens are involved, ducks are often advocated to keep snails and slugs in check. For home gardens and bush or glass houses, it may be possible to run a pet duck of the lighter breeds, such as Indian Runner or Khaki Campbell. A quiet hen or bantam will also serve to destroy many pests such as snails, slugs, slaters and grubs, before they have a chance to do damage.

Poisons, baits or arsenical sprays should not be used where ducks or fowls are run, but Bordeaux spraying can be safely practised.

Acknowledgment is made to the Department of Agriculture, N.S.W., for the formulae used in this article.

—37 Victoria St., Coffs Harbour, N.S.W.

CONVERSATION PIECE

CRYPTOSTYLIS. Genus *Cryptostylis* (R. Brown) is one of about 20 known species, five of which are endemic to Australia. The remainder are found in Java and neighbouring islands.

The remarkable partnership between various species of *Cryptostylis* and male Ichneumon-wasps in the achievement of pollination provides one of the strangest stories in the field of orchid study.

D. K. McAlpine, writing on wasps in the March, 1958, issue of the *Australian Museum Magazine*, states:—

“Many of the large family of Ichneumon Wasps parasitize caterpillars. One Australian species (*Lissopimpla exelsa*, formerly *L. semipunctata*) is remarkable for being the only insect known to pollinate the Tongue Orchids (*Cryptostylis*), of which there are several species in the Australian bush. Only the male wasp is concerned with pollination. He behaves as if the orchid flower was a female wasp and shows the usual mating behaviour. The pollen masses stick to the abdomen and are carried to the next flower where the pollen adheres to the glue-like substance of the stigma. Fertilization is thus effected.”—J.C.

Why Cymbidiums Need Feeding

BERT SCHWARTZ

• Feeding orchids has to be with a specific purpose in mind and that is to get maximum growth and flowers in the shortest possible time. When a plant is fed, what happens? How is the food assimilated? What produces the green leaves? What makes new roots appear? Why do bulbs shrivel? When we think a little about a plant, we little realize we witness a miracle of nature, so many interesting things happen over a period of time. Take a Cymbid. Examine the cycle of events that take place over a year.

First you have in spring the wonder of the flower spike appearing mainly on the new growth, sometimes on the last year's bulb. When flowering has ended the new growth matures into a bulb and starts another cycle of reproduction, other shoots appear and it seems it is no time before they in turn are pushing out flower spikes and so the cycle goes on; but I'm rambling.

The Root System

The most important functions of roots are anchorage and absorption, but they perform other necessary functions for the plant. You will notice how the roots cling to the inside of the pot onto some of the crocks in the bottom, thus obtaining anchorage. All parts of the plant body must be supplied with water and mineral salts through the agency of the roots.

Roots are generally thought of as being underground, and that is where they are usually located. However, in addition to the underground roots, we have *Prop Roots*, *Aerial Roots* and *Terrestrial Roots*.

Structure of Roots

In appearance roots may be delicate white structures or they may be thick and woody, for instance, the difference between a Vanda root and Cymbid., one is an aerial the other a terrestrial. In the case of a Cymbid. root there is a protective covering over and round about a very fine root; the fleshy substance covering this fine root absorbing the mineral salts and moisture and makes the food available to the root when needed, in other words, it acts as a reservoir of food and water.

Root Cap and Growing Point

One feature of roots is the root cap. It is a protective covering for the delicate growing point, as it is pushed through the compost. Immediately behind the growing tip are the cells

and back of these are the root hairs. Each hair grows out from a cell at the surface of the root. They absorb the thin film of water that surrounds the compost particles; thus if you over-water you kill these delicate hairs, because they cannot absorb all the water and in turn the cell dies, then the root right back to the pseudo-bulb and if every root goes the same way black rot could possibly set in or the plant would start losing leaves, because of the lack of food from the roots.

You have often heard of *Osmosis*. It is the movement of, or diffusion of water (or other solvents) through a semi-permeable membrane. Each cell has a membrane which allows water to pass through, but the membranes retain the sugars and starches, so you will readily agree that the cell, although not discernible by the naked eye, but only by looking through a powerful microscope, is a very important part of a plant.

In the cell lies the nucleus, the most important part of the cell, and there the whole secret of life lies. Man can make a grain of wheat the same in appearance as a true grain of wheat, but he cannot make it grow; why? because it lacks the nuclei, the essence of life itself, which is God given and not by evolution as some would have us believe.

Protoplasm

Quoting Max Schulze. (The Physical basis of life or it is called the life stuff.)

It is colourless like fluid which is called *sap* which flows from the root tip gathering velocity as it goes along the roots travelling through the bulb and finally to the leaves and thence from where it came and thus completing a cycle carrying food to all parts of the plant.

The cells are really the heart and the Protoplasm or sap the life blood. So remarkably like a human being and how wonderful when the cells divide and multiply themselves.

Pseudo-bulb or stem is the next part of a plant I want to discuss and analyse its component parts; how many times have you looked at a plant with a non-seeing eye. It registers on the mind as a plant and that's all, you go no further, but if you were to closely examine it with a microscope you would see a very wonderful picture of a living organism that

breathes and grows and if given the right amount of light and food will flourish.

The pseudo-bulb of a *Cymbidium* acts as a storehouse of food and water in its native habitat, but not so much when it is cultivated the way we grow them in Sydney; when we see a plant that is carrying numerous (Mother-in-Law) back-bulbs we're apt to look down our noses and say it is a poorly grown plant, but in its native habitat the plant would rely on the back-bulbs for survival in extreme conditions.

The pseudo-bulb is the connecting link between roots and leaves, besides serving as a support for the leaves, it is the great transportation highway and does other essential work important to the plant. On it are the leaves arranged so as to obtain the light so necessary for food manufacture by photosynthesis.

Water and minerals dissolved in water enter the plant through the roots; but it is through the pseudo-bulb these materials are carried to every part of the plant, including the leaves.

Now we come to a most important part of the plant, the leaves.

I've often looked at a sea of *Cymbidium* leaves and thought it just as well they're so narrow and long, otherwise no light could penetrate to the surface of the compost. One of the main features of a well grown plant is the erectness of the leaves; a plant that is not growing well has a tendency to hang its leaves.

Leaves are essential and remarkable structures, for in them is carried on the activities that are necessary for the plant to live. Leaves are likened to factories, strange as it seems. They get the raw materials from the air and the soil plus the light they receive from the sun combine them and produce the food (a process called photosynthesis).

Take away light and you will get sickly plants susceptible to all sorts of diseases and, most important, no flower spike to reward you for your labours.

Leaves vary considerably and if you were to study a leaf closely under a microscope you would see numerous little veins coming from a central one. The veins in the leaf help to support the fleshy part and they are the means whereby water and salts are brought to all parts of the leaf and that food made in the leaf is distributed to all parts of the plant.

Thus, when a plant is attacked by fungus disease, particularly the leaves, whose structure is damaged, it must cut down the plant's efficiency to manufacture food and consequently it

receives a sharp set back in growth.

Dust is also a damaging agent if allowed to settle and stay on leaves; it prevents the leaf from breathing, in other words, clogs up the surface of the leaves unless washed off by frequent spraying and will cause the plant to slacken in growth.

Leaves by their erectness tell you that the whole plant is happy with the growing condition, but beware when you see them hanging their heads or dropping. It either denotes a lack of water or the compost is broken down to such an extent that the water given them is rotting the roots and so causes the leaves to droop or turn yellow.

Leaves also tell whether the plant is receiving enough light or too much shade. For ideal flowering the leaves should be a pale green in the summer. If a deep green you can bet your boots that you're going to receive a poor return in the number of flower spikes.

The next part will deal with a feeding programme, also how to flower various *Cymbidiums* to get the utmost out of them as regards colour, size and substance.

(To be continued in issue September 1960)

—1178 Forest Rd., Lugarno, N.S.W.

ORCHID EXPORTS BOOMING

• Australia's export trade in orchids reached an all-time record of 18½ tons for the season June-November, 1959, reports the Department's Division of Marketing and Agricultural Economics.

This is an increase of 25 per cent. on 1958 production and 50 per cent. on 1957.

Ninety-eight per cent. of the exports were produced in New South Wales.

Of the total consignments of 700,000 blooms, 500,000 went to the United States and 200,000 to the United Kingdom.

Orchid exporting is handled by about a dozen agents, who buy direct from the estimated 50 per cent. of New South Wales growers who supply the export market.

Some 20 per cent. of the total orchid production is exported.

Early flowers (late winter) may bring up to 4/6 each, but prices decline as peak production is reached during spring.

Importations into the U.S. are not restricted, but blooms entering the U.K. must be accompanied by a "freedom from disease" certificate.

The above information was supplied by the New South Wales Department of Agriculture—Division of Information Services.

Culture Notes for Tasmania—Winter

F. W. CHILVERS

• Tasmanian orchid enthusiasts over the past three months have experienced many trials in the fluctuating weather conditions that have prevailed and has called for all the patience possible.

The State has experienced extreme hot conditions with water restrictions and now severe flooding. With the approach of winter it is most important that all plants should be checked over for pests. The dry conditions experienced are the ideal conditions for introducing scale, thrips and red spider and if these pests are not checked discoloration of the leaves will result and severe infestation can weaken the plants. White scale, if it penetrates to the rhizomes of the plant and even to the roots, can be very hard to eradicate. Sponging of all the foliage with a weak solution of "Cleasel" will give a nice gloss to the leaves and also remove the accumulation of dust on the foliage. A soft brush will remove the scale in most cases, but where the pests are severe the foliage can be dipped completely in a bucket of solution. Plants so dipped should be laid on their sides to allow the solution to drain away. If this penetrates to the axils of the leaves, decay could set in, particularly with *Cypripediums*, *Miltonias* and *Odontoglossums*.

All glass houses should be examined for "drip" from the rafters, faulty glazing and excessive moisture; condensation can cause this. The continual drip of cold water during wet periods can cause a plant to become saturated and is fatal to any but the hardiest of species. The cold and duller days of winter will soon be here and growers should give their plants as much light as possible to "harden them up" for the colder periods.

Watering will be a most important factor in keeping plants vigorous and healthy through the winter and water, preferably at glass house temperatures, should be used with discretion and watering applied only on fine days. Heavy saturation of plants over a long cold period can have a severe effect on the root system.

The *Cymbidium* flower spikes should be lightly staked, this will ensure nice straight stems for the coming shows and display flowers to advantage. Stakes should not be long as it is essential to preserve the lovely arching spikes of many varieties and too long a stake can

spoil this effect. Thin stakes can also be used on *Cypripedium* hybrids which have a tendency to lean and on *Miltonias* and *Odontoglossums*.

To growers using artificial heat, hot, dry conditions should be avoided in winter. This should be counteracted by damping down around the pipes and benches. Hot pipes should not be placed near the plants but kept low to the floor or even overhead of the foliage. Judicious use of bottom ventilation can also assist in the free circulation of the warm air from the heating system. The winter period would be a suitable time to test out the use of the polythene lining for a glass house. This can be easily tacked to the wooden rafters by drawing pins and is reasonably cheap in price. It has been used with success in the growing of many plants and will raise the temperature of a house a few degrees. It has one disadvantage in the condensation of moisture, but careful ventilation can check this.

The Editor of the *Orchid Review* has recently made mention of growing plants in the home; great success has been experienced by enthusiasts in England and America and many are growing plants well in sun rooms in Australia. I am sure there is a great field open to orchid lovers through the medium and who have not the facilities of a glass house.

The Tasmanian society would be most interested in reports of plants grown under such conditions. Our advisory panel also is always ready to give advice and help to new growers.

—1 Lassuade Ave., Sandy Bay, Tasmania.

ORCHID SOCIETY OF N.S.W.

presents its

WINTER SHOW

at the Y.W.C.A.

189 Liverpool Street, Sydney

MONDAY, 27th JUNE, 1960

11 a.m. to 10 p.m.

Admission 2/-

Hardwood Dendrobiums

BERT BONNYMAN

• The hardwood *Dendrobium* species and hybrids offer colour and types that would be hard to match in any other genus.

Flowers last from one to two months in perfection on the plants. They are splendid subjects for corsage work, exhibition and the cut flower trade.

The main species used as a base for the modern exhibition type *Dendrobiums* are the group *bigibbum*, *Phalaenopsis* and *superbiens*, which are related or interrelated.

The genus has probably more than a thousand species spread over the South Pacific, New Guinea and Northern Australia, where the temperatures and humidity are high.

Being epiphytes I find they grow best in osmunda fibre, in pots large enough to allow for two years' growth only. Some growers prefer to pot each year.

In temperate zones they grow best in the *Cattleya* house—either hung a few feet from the roof or on open benches to allow for free circulation of air. They prefer strong light.

During the growing season water copiously and fertilize regularly, using a fertilizer recommended for orchids. Personally, I use *Aquasol*.

I find in my house in September, if the temperature rises from 60 to 80 degrees, it starts the plants into active growth and you get your new growths matured by March and set for flowering. As summer approaches the temperature rises and so must the humidity. I find that during the flowering period the humidity and the temperature need be high and more or less even with a good circulation of air.

For disease control I use a combination of *Black Leaf 40* (nicotine) and *Bordeaux* mixture. This seems to take care of insects, fungus and bacteria.

It seems that numerous growers are affected by bud drop in growing this genus. Many people try to hypothesize the cause of bud drop, but no one answer seems to prove the cause distinctly above the others. The strain of plant and inbred weakness seem to be the popular assumptions. However, I think climatic conditions have something to do with bud drop also.

697-701 Port Hacking Road,
Caringbah, N.S.W.

FROM THE LETTER BOX

12 Ryrie Ave., Como,
Western Australia.
12/4/60.

Dear Sir,

In answer to your letter of 8/4/60 I have a question, the answer to which I feel sure will help many growers.

- (a) Why do *Dendrobiums* need small containers?
- (b) When an abundance of roots have grown outside and around the pot, is it advisable to repot into a larger pot? If so, what method should be adopted as the plant has such a firm grip on the old container?
- (c) Can *Dendrobiums* in general be grown on tree fern slabs?

I hope that this question will prove of value, as the culture of *Dendrobiums* in this State is gaining interest, especially to newcomers in orchid culture, because of quick and constant results.

We have had a mild summer and *Cymbidium* growers generally are jubilant about the number of spikes showing. It promises well for our Spring Show this year.

Our Winter Show will be held Thursday and Friday, 30th June and 1st July.

Wishing your committee every success.

Yours sincerely,

(Sgd.) H. E. FOOTE.

ANSWER.

- (a) To avoid the possibility of soggy and wet conditions at the roots.
- (b) Plants should have been repotted before the roots grew out over the edge of the pot. When the roots are outside it is sometimes possible to preserve them by soaking the pot very thoroughly and then freeing as many roots as possible from the old pot.
- (c) Repotting should always be done when the new roots are just appearing at the base of the new growth. Most *Dendrobiums* are grown in pots but with the increasing interest in fern slab culture further trials with *Dendrobiums* by this method would be of interest especially the Indian species.

—A.B.P.

An Effective Orchid Display

ALAN BIRDSALL

• Firstly, one must grow plants and orchids for at least two to three years and train them for frontal effect. It is necessary to have about 15 to 18 pots of cymbidiums of top grade, half being for shape and the other half for decorative purposes. I find that whites, pinks, yellows and greens lend themselves better to the blending of colours. One must select some with arching sprays and others with more upright spikes.

The miscellaneous section should be made up of as many genera as possible—namely, Cypripediums, Dendrobiums, Australian Natives, Cattleyas, Phalaenopsis, Odontoglossums, Vandas and Lycaste Skinneri, most of which are flowering in September.

For decorative effect, one must grow a large variety of foliage plants and Anthuriums. I find the most effective to grow are coloured Ivys grown in a pot, trained on a small, flat white trellis and looped around so that they may be used as a background. Another good background to use is Crotons. All these plants must be well grown and free from imperfections caused by insects of all types, which damage the foliage, and all foliage plants should be sprayed with a white oil emulsion to make the foliage bright and glistening and one must also keep in mind that all your plants and orchids must be trained early in their growth by stakes which are painted green, so that they cannot be seen and mar the effect of the display.

After being allotted approximately 6ft. x 4ft. space for display, one must decide whether it will be more effective tiered from the floor level to seven or eight feet or to be built up from table height. Personally, I think the former has more eye appeal than the latter.

A trestle or table should be erected up against the back wall, then two banana cases placed on it and in the centre of that a fruit case. Make sure that all of these are leaning towards the wall, otherwise you might find the structure could fall, which would, do doubt, be disastrous. In front of that, place two banana cases on the floor and put a table top on them, then cover the whole structure with green hessian.

On the centre tier I put my specimen plant of Anthurium Andreanum, then on either side two large pots of variegated Ivy and either side

of those two smaller pots of Ivy. This covered up a very drab painted wall. On the next tier I placed the pots with arching sprays of Cymbidiums, intermingling them with smaller foliage plants and Anthuriums in 6in. pots, so as to cover up the unsightly Cymbidium pots, being sure that no blank spaces were left. This would make the display about table height and at this stage all the pots and blank spaces should be filled in with moss, preferably Victorian Moss, or any other vines or bush leaves or anything of that nature which is easily procured. Any ticketing must be done at this stage, otherwise you cannot reach the plants to place the names in position. It is always wise to take extra plants in case of any unforeseen circumstances, a few odd sizes in pots, also a few wood blocks, so that you can raise or lower any plant which looks out of perspective, and sometimes racemes need to be lifted higher or allowed to fall lower if necessary.

From here, build up the floor from about 1ft. high, using suitable cases again and covering with green hessian, then proceed to put the best of your Cymbidiums with upright spikes and round about this area start to intermingle your larger miscellaneous types of orchids. It is necessary to stand back time and time again to view your display so as to see it is well balanced and also to build out the front portion so that it does not have too flat an appearance. If it has, build out the centre portion with orchids that have forward arching sprays.

Finally, place such as your Cypripediums, Lycastes, small Native Orchids, Odontoglossums, etc., on the floor, then to put the finishing touches on the front I place a 9in. pot on each corner of variegated box plant and fill in with various indoor foliage plants, then finish off the rest of the ticketing and moss filling, being sure that the entire display is neat and tidy and that no bare pots are showing.

It is very easy to overdo a display by having it overcrowded. Personally, I would sooner see a display with fewer plants but of high quality, than one with lots of plants of mediocre quality.

A display of this type does not cost the exhibitor very much money, but one needs a lot of energy and enthusiasm and the satisfaction derived is well worthwhile.

—54 Townson St., Blakehurst, N.S.W.

General Hints on Bush House and Glass House Culture of Foliage Plants

N. KELTY

Vice-President of Royal Horticultural Society of New South Wales and Chairman of the Glass House, Bush House, and Indoor Section.

• In submitting this article to the *Orchid Review* for publication, I prefer to qualify the following as the result of my experiences with glass and bush house plants. I recommend that you take them for what you think they are worth.

The cultivation and care of exotic glasshouse and bushhouse plants has many pleasing rewards to bestow on the person who is diligent and can understand their simple language. By carefully noting their daily progress and intelligently administering to their needs, the keen attendant will quickly discover that he has found one of the most delightful and absorbing of all relaxations. The pleasure and gratification is twofold if one is also able to find the time, space and the know-how to be a successful grower of orchids.

Foliage plants or orchids displayed singly are not as spectacular or as striking as when combined one with the other, in other words, follow nature's example. Create a scene; one you may be able to conjure up in your imagination, or one that you have actually happened on.

To be a successful grower of exotic foliage and flowering plants I suggest that your method of operation will need to be governed by the following essential factors. These I place in what I consider to be their correct order of precedence.

1. *Environment*. Is governed primarily by light, temperature, humidity and ventilation.

2. *Drainage*. Is governed by the looseness of the mixture and the amount and type of crocking in the pot.

3. *Watering*. Means the amount of water used and the manner in which you supply the means of dissolving and making available the food from which your plants derive their nourishment.

4. *Mixture*. In my opinion it is last on the list of requirements, because if the three previous rules have not been correctly carried out a little extra food in the pot will be of little use to the plant.

Environment. To satisfactorily fulfil this requirement you should know the normal condi-

tions that exist in the locality where the plant in question naturally grows. It is necessary to know the approximate high and the exact low temperatures under which it will flourish in the warm months and exist in the cooler times of the year. You must also provide as much or as little moisture in the atmosphere as your subjects need for their happy existence.

Another important point to remember in environment is that some of your plants will require a maximum of diffused light whilst others will grow better in shade of larger subjects or in the darker parts of your house. It is important for you to understand the atmospheric requirements of any plant you intend to grow. Who would try to grow a choice maidenhair fern under the scorching rays of a desert sun or try to grow a tough cactus in the shady, cool, moist and humid conditions where the *adiantum* flourishes. Yet you and I sometimes unwittingly acts as silly as this with our charges.

Drainage. Drainage is governed by the looseness of the mixture, coarse sand makes the potting material more porous. It is hardly possible to lay down any exact portion of sand required, as base material could and does vary, so all that can be said is that you need sand to make your mixture porous to allow the water to penetrate freely and also to allow any surplus to quickly drain away.

The latest tendency in drainage is to give extra openness to the growing medium, thereby reducing the necessity for extensive crocking in the pots, thus making additional growing space available to the plant. I am inclined to agree with the theory of adopting this principle, but would suggest that any departure from a procedure that has proved successful should only be undertaken after all points for and against have been carefully considered. Bear in mind one of the cardinal rules:—Wet feet are very harmful.

I believe that my plant's liquid requirements are more suitably met with small, frequent waterings and splashes on the leaves, than they

would be with large copious drinks at two or three days interval. Furthermore, visit them once or even twice per day as needs require, especially in the warmer months. You are more intimate and have more knowledge of their problems than if you give them a heavy watering and tell yourself that they are right for the next two days. Humidity, one of the most neglected but most essential of all requirements is much more effectively provided if you visit and splash your plants, pots, benches and floor as frequently as possible.

Mixture. I repeat here that mixture is only important if all the before mentioned requirements have been attended to. I would agree that most, if not all, mixtures you have been told or have read about from time to time are good, and perhaps good enough. The basic requirements of a good mixture are, porosity, food, ability to remain moist, as most of the plants we grow in glass house and bush house culture are acid loving. I use little lime, but at the same time make certain that only air sweetened component parts are used. The potting mixture I favour and use is one part clean garden and glass house refuse (composting assisted with any good trade powder), one part of sieved leaf mould, one part of fairly new cow manure or one-third part of new fowl manure, one part of air sweetened old potting mixture, enough sand, about half part to keep the mixture open, all of which I thoroughly mix through a half-inch sieve to ensure that large lumps of manure have been broken or removed. The reason for my preference for fresh sieved and well mixed manure instead of the often mentioned well rotted manure is that much of the available old, well rotted manure has had most of its essential nutriment washed out of it with rain or burnt out with spontaneous combustion. To this I add complete artificial fertilizer as required.

In conclusion, I consider the two most important factors governing the successful culture of glass house and bush house plants are:—

1. Finding the position in which your plant will flourish.
2. The manner in which you water it.

General rules of plant care

1. Never use icy cold water.
2. In the winter water less and preferably in the morning.
3. Never leave water in the saucer.
4. Keep foliage clean by occasional wash or spray.
5. Feed only established growing plants.

6. Never feed if the soil is bone dry.
7. Water attentively and never give an
8. Water attentively, never given an automatic daily dose.
9. Do not let a crust form on top of the soil.
10. Most plants resent over potting.
11. To put a small plant in a big pot in cold weather could be fatal.
12. Fresh air is good for plants.
13. Cold draughts are harmful.
14. Some kind of drain is necessary in a pot.
15. Occasionally spend a few extra minutes watching plants, to make sure they are healthy and to ensure any trouble does not get out of hand.
16. All types of disease and pests are best controlled by the use of a good general purpose spray once every fourteen days.

—17 Albert St., North Parramatta.

• *SOUTH AUSTRALIAN ORCHID CLUB*:—The new President, Mr. F. C. Wood, occupied the Chair.

A most interesting set of kodaslides of orchids was shown. These had been lent by Mr. Wm. Kirch, of Honolulu, and included some of Mr. W. W. Goodale Moir's new bigeneric crosses.

Popular Vote: 1st, Mrs. C. Homes, L.C. Oshawa; 2nd, Mr. A. Allen, Cyp. Holdenii; 3rd, Mrs. C. Homes, L.C. Illustrious, Mr. J. Langdon, C. Queen Bess, a tie.

The President farewelled Mr. & Mrs. A. McAllen, who are leaving for a world trip including the 3rd World Orchid Conference, London.

April Meeting: Three members spoke on miscellaneous genera — Mr. N. Christoph, Warm House Section. Mr. J. Langdon, Cool House Section. Mr. W. Harris, Bush House Section.

Most interesting, it showed how orchids adapted themselves to varying conditions. Examples were shown of *Den. Bigibbum* var. *phalaenopsis* and *compactum* from warm and cool houses.

Popular Vote, Senior Section: 1st, Mr. N. Christoph, *Den. Bigibbum*; 2nd, Mrs. Homes, Cyp. Saraband, Mr. F. H. de Rose, *Oncidium varicosum* Rogersii, a tie.

Novice Section: 1st, Mr. L. A. Bengers, C. Mount Royal; 2nd, Mr. R. G. Stoeckels, C. Bowringiana; 3rd, Mr. E. T. White, *Odont. Grande*.

• **JOTTINGS FROM THE BLUE MOUNTAINS:**—A feature of the February meeting of the Blue Mountains Orchid Society was the manner of conducting a Quiz night. Instead of the audience asking the questions, as is customary, and the answers being given by the Quiz masters, the latter prepared both the questions and answers, three answers being given to each question, one of which was deliberately wrong, one only half right and the other the correct answer. Each member of the audience was given pencil and paper and, when the answers to a question were given, it was their role to write down what was considered to be the right answer. This meant that everyone in the audience had to take part. The answering of the questions was made competitive and at the end of the session action was taken to see who had answered correctly most of the questions.

Four Quiz masters were appointed and each handled a different subject, e.g., one dealt with Cymbidiums, another Cattleyas, another Dendrobiums and the fourth with pests. The method adopted in conducting such an evening proved a great success and is referred to as other affiliated Societies might be interested.

At the March meeting, another new idea was initiated. Growing from seed planted at the Affiliated Societies' Delegates' meeting called together by the Parent Society in February last, a visit was paid by the President (Mr. Webb) and a number of members of the Parramatta Society to the Blue Mountains Society. This friendly visit was greatly appreciated and will be reciprocated by Blue Mountains' members on the 2nd May. Such visits can only deepen the bond existing between orchid lovers of the kindred societies.

At this meeting Mr. A. R. Begg gave an address on points in judging orchid flowers and, where plants in flower were not available, lantern slides were shown by the speaker to stress his points. All members learned a great deal from Mr. Begg's address, and we should like to say, "Thanks a lot, Alan."

E. H. MACDONALD,

Pres., Blue Mountains Orchid Society.

BEAT THIS

The cover picture illustrating *Dendrobium Thyrsiflorum* demonstrates a remarkable cultural achievement by Mr. Harold Crutch of Hurstville, N.S.W. It carried no less than 36 florescences. Awarded cultural certificate, O.S. N.S.W. Photo. Fred Moulen.

• **NOTES FROM TASMANIAN ORCHID SOCIETY:** — Forty members and guests of the Tasmanian Orchid Society were privileged to hear a very interesting and entertaining talk by Mr. Dave Hardie, President of the Kuring-gai Orchid Society (New South Wales), who was spending a holiday in Tasmania, accompanied by Mrs. Hardie.

Mr. Hardie urged Tasmanian growers of Cymbidiums to grow their plants out of doors during the summer months. Bush house culture, so successfully practised in Sydney, could be followed in Tasmania during the hot months.

Some interesting points made by Mr. Hardie during his address were:

(1) All ingredients in the potting mixture should have some food value. For this reason the use of sand, sphagnum moss and fern fibre as recommended is not sufficient.

(2) Composts may be kept open and well drained by using buzzer chips as an ingredient. Rice hulls are a suitable alternative.

(3) Sticks rather than crocks are now preferred in the bottom of pots.

(4) Fowl manure is used by the majority of Sydney growers for feeding plants. A good method of enriching the compost is to place one of the ingredients (leaves or tan bark) in the fowl-pen for a few months before mixing. In this way the leaves become thoroughly impregnated with manure.

(5) When using a heavily enriched compost it is essential to water very freely so that the compost never becomes dry.

During the course of his address, Mr. Hardie gave his formula for a dusting powder to control fungus and a general purpose spray "cocktail" which would keep the glasshouse free of red spider, mite, scale, chewing insects and snails, and arrest Black Spot and "Whin-ner".

Mr. Hardie concluded by demonstrating the back cutting of two Cattleyas, by the breaking up and re-potting of a Cymbidium and the taming of an untidy Vanda.

On 1st May, 1960, a large band of enthusiastic members, accompanied by Mr. and Mrs. Hardie, set out despite a cold wet day on a compost picnic arranged by one of the Society's Vice-Presidents, Mr. Eric Vince. Due to Eric's knowledge of the Sandfly-Margate area, members were able to secure large quantities of fern fibre, leaf mould and river gravel. Eric had to "organise" a tractor and trailer to move the loot out of the scrub!—B. R. Davis, Hon Sec.

Secretaries of Orchid Societies and other contributors are reminded that reports and articles must reach the Editor NOT LESS than six weeks prior to the publishing date of the next issue. Thus the closing date for the September issue is July 15th.

The printers also have their problems. Let us cooperate for smooth working.

• **QUEENSLAND ORCHID SOCIETY—AUTUMN SHOW, 1960:**—The Queensland Orchid Society staged its Autumn Show for 1960 in the show rooms of Metropolitan Motors, Adelaide St., Brisbane, on April 29/30.

This, the third of the Autumn Shows, produced tangible evidence of the growing popularity of the phalaenopsis type of Dendrobiums and the great advances made in recent years in hybridising this branch of the Dendrobe genus.

The feature class was "The Champion Cooktown Orchid of Queensland" which attracted entries from as far distant as Cairns. The *Courier-Mail* donated a handsome trophy for this class to commemorate the proclamation of the "Cookie" as Queensland's Floral Emblem and Mrs. B. W. Meade, of Brisbane, proudly carried it off with a fine specimen carrying some 100 blooms.

Results in the competitive classes were:—

Champion Cooktown Orchid: 1. Mrs. B. W. Meade; 2. Mr. G. L. Piper; 3. Mr. G. L. Piper.

Best Dendrobium: 1. R. J. Stockton, D. Pauline; 2. E. A. Knoblauch, D. Anouk; 3. E. A. Knoblauch, D. Anouk.

Best Cattleya (inc. inter-generic hybrids incorporating the Cattleya): 1. Dr. V. R. E. Murray, Potinara Media x Lc. Isotta; 2. E. A. Knoblauch, C. Bob Betts; 3. A. M. Clinch, Bc. Thalie.

Best Phalaenopsis: 1. S. B. Ward, Phal. violacea.

Best Vanda: 1. T. C. Harveyson, V. Tan Chay Yan; 2. J. Bearup, V. Rothschildiana.

Best Cypripedium: 1. J. Bearup, C. Maudiae Magnificum; 2. J. Bearup, C. insigne 'Royalty'.

Best Any Other Genus: 1. Miss K. McIlrath, L. Anceps.

Best Native Orchid: 1. Mrs. B. W. Meade, Cooktown Orchid.

Champion Specimen of Show: R. J. Stockton, D. Pauline.

Composite Exhibit of Orchids and Foliage Plants: 1. E. Knoblauch; 2. G. L. Piper.

Mr. Knoblauch's composite exhibit was a very well-arranged collection of Dendrobies and Cattleyas showing out well against a basic background of beautifully grown foliage plants—the latter probably excited more comment from the public than the orchids.

Mr. Piper's exhibit showed great variety among the Dendrobies, which included fine specimens of Lady Hamilton, Neo-Hawaii, Hawaii Nui, Colin Potter, Mauna Kea and numerous others.

The Vandas which gained prizes for the old stalwarts of the Society, Mr. Harveyson's Tan Chay Yan and Mr. Bearup's Rothschildiana, were fine quality plants, both showing the typical qualities which have gained world renown for their crosses.

Members of the Gold Coast Society staged a group exhibit organised by Miss K. McIlrath, of Banora Point. The orchids stood out well from some fine specimens of Alocasia and Anthurium. The Ipswich Orchid Society was also represented by some very nice Dendrobiums organised by Mrs. C. Kelly, while the ladies of the Q.O.S. again combined to show that the men of the Society are not the only ones who can grow orchids and exhibit them effectively.

• **ST. GEORGE ORCHID SOCIETY:**—

At the recent Annual Meeting of the above Society the following Office Bearers were elected:

President: W. D. Jones, 45 Oliver Street, Bexley. Vice-presidents: L. A. Peaty, J. Scott. Hon. Secretary: F. T. Golding, 49 Samuel Street, Peakhurst. Hon. Treasurer: H. Mills. Hon. Librarian: A. Bryant. Committeemen: R. Dean, A. Gillson, H. Goodwin, H. Griffin, L. Lynham, F. E. Smith, F. J. Smith, H. Wight.

The society meets at 8 p.m. on the first Tuesday of each month at the Rockdale Methodist Church Hall, Rockdale.

As usual, two shows will be held this year. The Winter Show will be held on Saturday, 9th July, 1960, at the Palais Grande, 8 Frederick Street, Rockdale, and the Spring Show will be held over three days, Thursday, Friday and Saturday, the 8th, 9th and 10th September, 1960, at Legacy House, Ormonde Parade, Hurstville.

• **OFFICERS OF ORCHID CLUB OF SOUTH AUSTRALIA FOR 1960:**—President: Mr. F. C. Wood, 22 Stanley Street, Woodville. Vice-presidents: Messrs. H. Harrison and R. Waye. Immediate Past President: Mr. N. Christoph. Committee: Messrs. F. C. Bridge, J. Langdon, C. England, Mesdames C. Homes and J. Conquest.

• **MANNING RIVER ORCHID SCTY.**—The annual meeting was held on 4th March in the Commonwealth Bank.

Prior to commencement of business one minute's silence was observed in memory of the late Mr. W. Rothwell.

The election of office bearers resulted as follows:

Patron: Mr. J. Bury. President: Mr. J. Folkard. Vice-presidents: Messrs. J. Bury, W. E. Wrigley, E. McGregor. Secretary: Mr. G. Coleman. Treasurer: Mrs. L. Simpson. Publicity Officer: Mr. T. R. B. Boyce. Auditor: Mr. T. Mitchison.

Winners of the Point Score Competition were.—Cymbidium Section: E. McGregor 89 points. Any other genera: G. Coleman 56 points.

It was decided to add another section to the point score competition for the new year, viz.: Cymbidium, any other genera, and Native (new section). One exhibit in each section. The membership has increased from 30 to 61.

Visitors are always welcome at the meetings which are held on the first Friday of each month at 7.30 p.m. in the Commonwealth Bank, Taree.

ANNUAL SHOWS

Winter Shows

Western Suburbs Orchid Society.—Saturday, 25th June, Memorial Hall, Majors Bay Road, Concord.

Orchid Society of N.S.W.—Monday, 27th June, Y.W.C.A., Liverpool Street, Sydney.

St. George Orchid Society. Saturday, 9th July, Palais Grande, Frederick Street, Rockdale.

Spring Shows

Belmont-Swansea. 9-10 Sept., Belmont V.J. Hall.

Blue Mountains. 7-8 Oct., Warrimoo Citizens Hall, Western Highway, Warrimoo.

Boolaroo. 23-24 Sept., Boolaroo Cultural Centre and Memorial Hall, Main Rd., Boolaroo.

Byron District, Camden.—24th Sept., Cam-

den High School Hall, John Street, Camden.

Commonwealth Bank.—20th September, Commonwealth Bank, Martin Place, Sydney.

Eastern Suburbs.—9-10 September, Graham Memorial Hall, Victoria Street, Charing Cross.

East Hills.—24 September, St. Christopher's School Hall, Tower Street, Panania (members only).

Gosford.—22-24 September, Masonic Hall, William Street, Gosford.

Illawarra.—

Eastwood.—23-24 September, Masonic Hall, Eastwood.

Kuringai.—12-13 August, Memorial Hall, Marion Street, Killara.

Maitland.—23-24 September, Maitland Town Hall.

Manly.—16-17 September, Manly Town Hall.

Manning River.—30 Sept. and 1 October.

Mosman.—2-3 Sept., Mosman Town Hall.

Newcastle.—14-17 September, City Hall, Newcastle.

North Shore.—9-10 September, Chatswood Town Hall.

Northern Rivers.—9-10 September, Lismore.

Parramatta.—15-17 September, City Hall, Parramatta.

St. George.—8-9-10 September, Legacy House, Ormonde Parade, Hurstville.

Shoalhaven.—10-11-12 September, Basement, Shoalhaven District Hospital.

Sutherland.—24 September, Kindergarten Hall, Kanimbla Road, Miranda.

Sydney.—27 August, Remembrance Hall, Lakemba Street, Lakemba.

Tweed District.—Display during Tweed Banana Festival—last week in August.

Warringah.—25-26 August, Thursday and Friday, Mosman Town Hall.

Western Suburbs.—23-24 September, Memorial Hall, Majors Bay Road, Concord.

Yagoona.—8 October, Yagoona Public School, Hume Highway, Yagoona.

Interstate Shows

Orchid Club of S.A.—Winter Show, 7 July, 1960, Public Library, North Terrace.

Spring Exhibition, 19, 20 and 21 September, Liberal Club Hall, North Terrace.

Orchid Society of Western Australia. Winter Exhibition, 30 June and 1 July, Perth Town Hall.

Spring Exhibition, 6 and 7 October, Perth Town Hall.

Victorian Orchid Club.—Spring Show, 4 to 8 October, Preston Motors Showrooms, Melb.

New Orchid Hybrids

January, 1960

Reprinted from English Journal "The Orchid Review"

Name	Parentage	Flowered by
AERIDOVANDA		
" Ruby Charles	<i>V. lamellata</i> x <i>Aerides jarckianum</i>	J. H. Miller
BRASSOCATTLEYA		
" Ashdown	<i>C. Nigritian</i> x <i>Bc. Vilmoriniana</i>	David Sander's Orch. (Sanders)
BRASSOLÆLIOCATTLEYA		
" Ceylon Trinket	<i>C. bowringiana</i> x Ceylon Delight	H. W. Crothers
" Golden King	<i>Lc. Goldfish</i> x <i>Bc. Bruges</i>	Roger Sander (Sanders)
" Moonbelle	<i>C. Dousabel</i> x Joyance	Armacost & Royston
" Shanghai	<i>Lc. Jocelyn</i> x Ojai	Nancy Ann Abbott
CATTLEYA		
" Ann Bow	Ann Alberts x Bow Bells	Rod McLellan Co. (E. W. McLellan)
" Bo Peep	<i>claviana</i> x <i>mossiae</i>	Wm. T. Burns
" Cerro Blanco	White Sail x Bob Betts	Armacost & Royston
" Highland Heritage	Barbara Billingsley x Mary Bea Ireland	"
" Token	<i>C. Dousabel</i> x Kittiwake	Westenberger Orch. Co.
" Tonka	Nettie Tipton x Alice Belding	Armacost & Royston
CYMBIDIUM		
" Solana	Lucy x Centaur	Carlton's Orchids
" Windsor Belle	Windsor x Doris	" "
CYPRIPEDIUM		
" Annora	Ann Harper x Norah Smith	Dr. W. Stirling
" Gently	Golden Desire x Bahram	" "
" Golden Finch	Golden Desire x Snow Bunting	Wm. T. Burns
" Green Maiden	Ballet Girl x Lady Diana	Dr. W. Stirling
" Hamadryad	Wavecrest x Vestalia	"
" Hymen	Mystery x Prinny	Armstrong & Brown
" Kentish Maid	Hancar x Bahram	Dr. W. Stirling
" Pervina	Perseus x Alvina	"
" San Carlos	Diversion x Cadina	Rod McLellan Co. (E. W. McLellan)
DENDROBIUM		
" Daitaro Miyake	Ann x Lady Hamilton	Montgomery
" Digger	Colin Potter x <i>undulatum</i>	J. H. Miller
" Lim Kit Yee	Pompadour x <i>bromfieldii</i>	Lim Choo Seng
" Serangoon Beauty	Lady Lange x Lady Hamilton	T. J. R. Hale (Tan Chee Seng)
LÆLIOCATTLEYA		
" Afro	<i>C. El Toro</i> x Ennerdale	Nancy Ann Abbott
" Ak Sar Ben	<i>C. Tethys</i> x Atlantis	Rod McLellan Co.
" Black Gold	Treasurer x <i>C. Nigritian</i>	Nancy Ann Abbott
" Bullion	Bonanza x <i>C. El Toro</i>	"
" Catharina J. Went	Gloria x Geraldine S. Thompson	Missouri Bot. Gdn.
" Dark Queen	Queen Mary x <i>C. Nigritian</i>	Nancy Ann Abbott
" Ditto	<i>C. Porcia</i> x Honoria	"
" Florence Pons	Lily Pons x Florence Pickard	Rod McLellan (E. W. McLellan)
" Good Strike	Archdeacon x Bonanza	Nancy Ann Abbott
" Haiti	Derrynane x <i>C. Nigritian</i>	"
" Happy Holiday	Joseph Hampton x Areca	Westenberger Orch. Co. (Stewart & Hecker)

January, 1960—continued

Name	Parentage	Flowered by
LÆLIOCATTLEYA—Cont.		
" Kalama	Cuesta x <i>C. Nigritian</i>	Nancy Ann Abbott
" Little Susie	<i>C. Porcia</i> x Molly Tyler	Armacost & Royston
" Maderia	Boadicea x Savitar	" "
" Memindra	Indra x Mem. Walter Armacost	" "
" Mimerdale	<i>C. Mimir</i> x Ennerdale	Nancy Ann Abbott
" Napua	Desmond Sander x <i>C. Nigritian</i>	" "
" Nigrescent	Bonanza x <i>C. Nigritian</i>	" "
" Ning Po	Nugget x Excelsis	" "
" Pairika	Detta x <i>C. Nigritian</i>	" "
" Par Chance	Bonanza x Ennerdale	" "
" Pasadena Parade	Areca x Gitche Manito	" "
" Paul Baker	Dorothy Fried x Ennerdale	Westenberger Orch. Co. (Stewart & Hecker)
" Persian Honeymoon	Atlantis x Tokyo Rose	Wm. T. Burns
" Pow Wow	Gitche Manito x <i>C. Michael Sander</i>	Westenberger Orch. Co. (Stewart & Hecker)
" Purple Feather	<i>C. Fabia</i> x Cabazon	Nancy Ann Abbott
" Quenchless	Cassandra x <i>C. Nigritian</i>	" "
" Royal Plumage	Sargon x Cabazon	" "
" Saba	Ennerdale x <i>C. Nigritian</i>	" "
" Taurus	<i>C. El Toro</i> x Cuesta	" "
" Tetrasue	Susan x <i>C. Tityus</i>	" "
" Texan	Cavalese x Sam Houston	" "
" Top Brass	<i>Eminence</i> x <i>C. Nigritian</i>	" "
" Truly Fair	Flying Cloud x Albula	Westenberger Orch. Co. (Stewart & Hecker)
" Valkyrie	Cassandra x <i>C. Tityus</i>	Nancy Ann Abbott
MILTONIA		
" Lola Lane	Limelight x Lyceana	Gordon M. Hoyt
PHALÆNOPSIS		
" Anne Grosvenor	Helle x Clara I. Knight	Lewis C. Vaughn
" Caroline	Doris x Boulder	" "
" Orchid Acres	Dawn Mist x Doris	Rod McLellan Co.
" Red Coral	<i>buyssonian</i> x Doris	Clarelen Orchids
" Spring Song	Fontainebleau x <i>lindenii</i>	Lewis C. Vaughn
POTINARA		
" Charmides	<i>Lc. Bonanza</i> x Medea	Westenberger Orch. Co. (Stewart & Hecker)
" Royal Plum	<i>Lc. Medon</i> x Red Friar	Orchid Ranch Inc.
RENANTHOPSIS		
" Coral Star	<i>Renanthera coccinea</i> x <i>Phal. sanderiana</i>	Lewis C. Vaughn
SOPHROLÆLIOCATTLEYA		
" Mayor Daley	Fire Queen x Rosamond	Joseph W. Smith (Rivermont)
VANDA		
" Towers	Caroline Robinson x V. Rothschildiana	James H. Bell (Wm. Kirch)
" T. S. Kuah	Tan Chay Yan x <i>sanderiana</i>	T.M.A. Orchids
VANDÆNOPSIS		
" Explorer	V. Miss Joaquim x <i>Phal. aphrodite</i>	Lewis C. Vaughn

CORRECTION TO MARCH LIST, 1957:—

Parentage of *Dendrobium* Tumphal should read: Indonesia x *phalænopsis*.Parentage of *D. Dhonburi* should read: Indonesia x May Neal.

CORRECTION TO OCTOBER LIST, 1958:—

Parentage of *D. Rosalind* should read: Lois Anderson x Indonesia.

CORRECTION TO MARCH LIST, 1959:—

Parentage of *D. Nipatha* should read: Indonesia x Pompadour.

CORRECTION TO OCTOBER LIST, 1959:—

Parentage of *D. Pinya* should read: Indonesia x Lady Hamilton.

Please note that the name of *D. Arcuatum* for the cross (*D. schroderianum* x *violaceo-flavens*) was changed to *D. Indonesia* to avoid confusion with the species *D. arceutum*. (See *Orchid Review*, March, 1957).

February, 1960

Name	Parentage	Flowered by
ARANDA		
" Lilac Bloom	<i>Arachnis</i> Maggie Oei x <i>V</i> Julia Sideris	G. Moir
BRAPASIA		
" Serene	<i>Aspasia principissa</i> x <i>Brassia gireoudiana</i>	"
BRASSIDIUM		
" Supreme	<i>Onc. papilio</i> x <i>Brassia maculata</i>	" Wong Ngooi Kong (S'pore Bot. Gdns.)
" Tan Lean Bee	<i>Brassia maculata</i> x <i>Onc. lanceanum</i>	
BRASSOCATTLEYA		
" Cream Puff	<i>Pervenusta</i> x <i>C. Brussels</i>	O. M. Kirsch
BRASSOLÆLIOCATTLEYA		
" Alice S. Gushikuma	<i>Bc. Estelle</i> x <i>Lc. Balkis</i>	Kingo Gushikuma (Kodama Orch. Nurs.)
" Chambord	<i>Simoun</i> x <i>Lc. Roitelet</i>	Vacherot & Lecouffe (p.f.f.)
" Elizabeth Stephens	<i>Mollflora</i> x <i>Lc. Molly Tyler</i>	Rivermont Orchids
" Gold Strike	<i>B. cordata</i> x <i>Lc. Golden Jewell</i>	E. T. Iwanaga (Woodlawn O.N.)
" Kong-Urai Gold	<i>Zanturano</i> x <i>Malvern</i>	Rivermont (Bangkok)
CATTLEYA		
" Annette Levick	<i>Empress Frederick</i> x <i>Rajah</i>	B. B. Levick (Mansell & Hatcher)
" Cathy Cavaco	<i>Rembrandt</i> x <i>guttata</i>	T. Cavaco (Woodlawn O.N.)
" Chanterelle	<i>Ahmes</i> x <i>Marie José</i>	Vacherot & Lecouffe (p.f.f.)
" Gold Jewell	<i>Robert H. Jewell</i> x <i>hardyana</i>	Jones & Scully (R. Kiesewetter)
" Southern Lady	<i>Florence Patterson</i> x <i>Bob Betts</i>	R. C. Cameron
" Sparkle Plenty	<i>Obrieniana</i> x <i>Snowfall</i>	Westenberger Orch. (B. O. Bracey)
CYPRIPEDIUM		
" Bourneva	<i>Wendbourn</i> x <i>W. N. Evans</i>	Charlesworth & Co. Vacherot & Lecouffe (p.f.f.)
" Capricorne	<i>Dorama</i> x <i>Chaamba</i>	
" Vallegreen	<i>Desert Song</i> x <i>Shooting Star</i>	Valleamar Gdns. (Dr. W. Stirling)
" Vallesong	<i>Maureen Louise</i> x <i>Desert Song</i>	Valleamar Gdns. (Dr. W. Stirling)
DENDROBIUM		
" Dorothy Mau	<i>Russell Imasaka</i> x <i>Hawaiian Beauty</i>	James Mau (Alex. Chang)
" Garnouk	<i>Garnet</i> x <i>Anouk</i>	H. Iwanaga
" Jessis N. Odell	<i>Anouk</i> x <i>Sunset</i>	J. N. Odell (Alex. Chang)

February, 1960—continued

Name	Parentage	Flowered by
DENDROBIUM—Cont.		
" Kathryn Wong	Channing E. Jones x Hula Girl	E. C. C. Wong
" Lady Cleo	Cleopatra x Lady Fay	H. M. Kushima
" Lovely Hawaii	Orchidwood x Lady Constance	Mrs. Lester McCoy
" Marion Leehman	Lady Hamilton x Kehaulani Ayau	Edward Wong
" Martha Kennedy	John Pritchard x Lady Constance	Mrs. Lester McCoy
" Priscilla	Salome x Lady Hamilton	Y. Inouye
" Queen of Sheba	Diamond Head Beauty x Helen Fukumura	
" Zandra Nutting	Pauline x M. C. Jay	Col. "L. Nutting (Y. Ushijima)
LÆLIOCATTLEYA		
" Cancale	Ronsard x Hernani	Vacherot x Lecoufle (p.f.f.)
" Chaumont	Rocroy x Hernani	" "
" Hernalia	Hernani x Coppelia	" "
" Idol's Eye	Hirami x Desna	Westenberger Orch. (Stewart & Hecker)
" Ruth Ley Cooper	Miranda x Vallandina	W. T. McBroom (Jones & Scully)
" Susan Wagner	Theodore H. Wickwire x C. Ardmore	Mrs. Patricia Murphy
" Trudy Calder	Ted Trimble x C. Leda	George Off & Sons
MILTONIDIUM		
" Fiesta	<i>M. warszewiczii</i> x <i>Onc. micropogon</i>	G. Moir
" Petite	<i>Onc. triquetrum</i> x <i>M. regnelli</i>	"
ODONTONIA		
" Pastel	<i>M. festiva</i> x <i>Odm. cordatum</i>	"
ONCIDIUM		
" Goldflakes	<i>flexuosum</i> x <i>hyphaematicum</i>	O. M. Kirsch
" Stephen Hart	<i>pulchellum</i> x <i>micropogon</i>	G. Moir
" Sultamyre	Sultane x Palmyre	Vacherot & Lecoufle (p.f.f.)
PHALÆNOPSIS		
" Carillon	Vision x <i>amabilis</i>	" "
" Cascade	Hecube x <i>amabilis</i>	" "
" Corinne	<i>amabilis</i> x Latone	" "
TRICHOCIDIUM		
" Gold	<i>Onc. papilio</i> x <i>Trichocentrum tigrinum</i>	G. Moir
VANDA		
" Coral Sands	Mary Foster x Gertrude Myamoto	J. E. Jones
" Leslie H. Kagawa	Iolani x Miss Joaquim	Hiroshe Kagawa
" Ruth T. Nitta	Trisher x Miss Joaquim	H. K. Nitta
" Vulcan	Mem. T. Iwasaki x <i>insignis</i>	Y. Inouye
VUYLSTEKEARA		
" Hawaii	<i>M. warszewiczii</i> x <i>Oda. Saxa</i>	G. Moir

CORRECTION TO AUGUST LIST, 1959:—

Registration of *Cattleya* Salome should be attributed to Rolf Altenburg and not to W. Silva.

CORRECTION TO NOVEMBER/DECEMBER LIST:—

Vanda Yong Yuet Lim should read Yuet Yeng Lim.

ORCHID GROWERS !**Save Time**

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year of 4 issues posted.

*Agents for the "Australian Orchid Review"
in Great Britain*

Messrs. B. F. Stevens & Brown Ltd.,

Library & Fine Art Agents,

77-79 Duke Street,

Grosvenor Square, W.1.

LONDON

are carrying stocks of current and back numbers of the *Australian Orchid Review*.

Readers in Great Britain should communicate with them regarding their supplies.

JUANITA NURSERY *"The Home Of Exotic Plants"*

Now have available community pots of orchids. They include several different varieties and crosses of plants and each pot contains from 20 to 30 plants. Listed below are a selection of plants. For further information, inquire

Phalaenopsis Doris x Storei (red)	.....	.....	£12 10 0
Phal. Violacea x Lindenii (cream & violet)	.....	.....	£10 0 0
Phal. Sally Lowrey x Chieftain (red lip)	.....	.....	£ 7 10 0
Cat. Empress Bells x Suzanne Hye (white)	.....	.....	£10 0 0
Den. Mauna Kea x Gouldii alba (white)	.....	.....	£ 7 10 0
Miltozia Anne Warne x Jean Sabourin (dark red)	.....	.....	£12 10 0
Diaattleya Chastity (green, white, pink)	.....	.....	£ 7 10 0
Vanda Nellie Morley x Bill Sutton (dark pink)	.....	.....	£ 7 10 0
Vanda Evanita Midriff x Sanderianna (pink)	.....	.....	£ 7 10 0
Den. Lady Faye var. Flame x L. Faye var. Ellen	.....	.....	£ 7 10 0

29 La Boheme Ave., Caringbah, N.S.W.

Phone: LB7273

ALUMINIUM ALLOY *Waldor* Greenhouses PREFABRICATED

The Waldor "Junior"—Size: 8ft. x 12ft.

Price £103.15.0.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Road, Bexley. N.S.W.

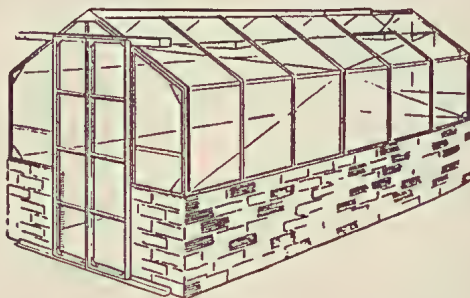
Phone LY7985

Tasmanian Enquiries:—

Tasmanian Chemicals Pty. Ltd.

129 George Street, Launceston
and

60 Harrington Street, Hobart.



LIMBERLOST ORCHID SEEDLINGS

Shipped bare root ex 1½" pots.

- | | |
|--|---|
| 57 D. Phalaenopsis Snow White x Tofftii. | 329 D. Waikiki Girl x D. Amber Glow. |
| 134 D. Superbum var. Limberlost. | 350 D. Pompadour x D. P. Peterson. |
| 193 Dend. Canaliculatum var. alba x Dend. Dicumphum. | 368 D. Phalaenopsis Snow White x D. Veratrifolia. |
| 200 V. G. Triboulet x V. Manila. | 377 V. Spathulata x V. Ellen Noa. |
| 242 V. Diana x V. La Paloma. | 394 V. Joaquim var. Atherton x V. Hindsii. |
| 245 C. Loddigessii x L. C. Apphrodite. | Anthurium Bookeri |
| 255 D. Agnes Ann x D. Anouk. | Anthurium Crystallinum |
| 256 (V. Suavis x V. Honolulu) x Sanderiana. | " Bakerii |
| 261 V. G. Myamoto x V. Sanderiana. | " Acutifolium |
| 288 V. Batemanii x (Sanderiana x Renan, Lena Rowld). | " Grande |
| 317 D. P. Peterson x (D. Pompadour x Louis Bleriot). | " Regale |
| 327 D. Schroederianum bicolor x D. Salak. | " Acutifolium x Crystallinum |
| | " Grande x Crystallinum |
| | Livistona australis |

Above plants 7/6 ea. £4/4/- per doz. assorted. Please add 7/6 to cover Forwarding. Orders and Inquiries to:—J. E. JONES, LIMBERLOST NURSERY, P.O. FRESHWATER, CAIRNS, N.Q.

SHOULD ORCHIDS HAVE NEIGHBOURS?

Enhance Your Display of Orchids in bloom with Exotic and Colourful Foliage

- | | |
|--------------------------------------|---|
| Alexandra Palm | Peperomia Black Boy |
| Apphelandra Louisea | Peperomia Lanceolata |
| Philodendron Auritum | Geogenanthus undata |
| Cissus Dicolor | Ravenala Madagascariensis (Travellers Palm) |
| Sanseveria Cyclindricum | Crotons (assorted) |
| Dieffenbachia Picta | Cordyline rubra |
| Erymophloeus Normandyii (Black Palm) | Saintpaulias (Name colour required) |
| Peperomia Metallica | Syngonium Wendlandii |
| Plecanthus Coeliodes | Setcreasea striata |
| Eranthemum tricolor | Vanilla Planifolia |
| Colocasia viciaeum | Bellaparon (Yellow) |
| Philodendron Imbe | Calathea Amabilis |
| Pereskia Aculeata | Stromanthe Sanguinea |
| Philodendron Scandens Variegata | Eranthemum bicolor |
| Peperomia Silverheart | Graptophyllum variegata |
| Peperomia Sandersii | |

Above plants 5/- ea. £2/10/- per dozen (assorted). Forwarding charges at cost. Inquiries to:—J. E. JONES, LIMBERLOST NURSERY, P.O. FRESHWATER, CAIRNS, N.Q.

LIMBERLOST FERNBARK FIBRE

(With Sphagnum Additive)

Graded, dust free ready to use. An ideal Orchid potting medium.

FINE	MEDIUM	COARSE
For Young Seedlings and Planting out flasks	Seedlings and Propagation to 4" pot	Advanced and Adult plants.

Per Bag (Contents approx. 10 quarts) . . . 10/6 (3 bags for 30/-)

FROM **J. E. Jones,** "LIMBERLOST" NURSERY
P.O. FRESHWATER — CAIRNS — N.Q.

Advertiser wishes to purchase copies of Australian Orchid Review 1952, 1953, 1954, December 1955, June 1957, March and June 1958. Please contact Dr. Frejvid Borg, Nadendal, Finland.

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
"Orchidees"

31 Rue de Valenton
BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Dendrobiums From India

All flowering size.

All 30/- each

Dend. Parishii	
" Chrysotoxum	Dark rose & purple.
" Formosum var:	Yellow gold.
" giganteum	White. Orange lip.
" Formosum	
" Jamesianum	White & cinnabar red
" Aggregatum	Yellow gold.
" Dalhousianum	Cream & yellow.
" Nobile var: pendu-	Purple.
lum	

Dend. Primulinum	Pale to dark mauve.
" Fimbriatum var:	Yellow. Maroon throat.
" ocellatum	Pale pink.
" Farmerii	White with orange lip.
" Thysiflorum	Apricot.
" Moschatum	Pale mauve.
" Pierardii	White & yellow.
" Hildebrandii	Yellow gold.
" Densiflorum	

AIRFREIGHT EXTRA. ALL PLANTS **30/-** EACH. FLOWERING SIZE.

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS, NTH. QLD.

Send for general price list of other orchids

AUSTRALIAN BOTANICALS WANTED

An amateur grower living in the Bahamas with climate similar to coastal North Queensland wishes to purchase a representative collection of Australian Native Orchids of all types indigenous to Northern N.S.W., Northern W.A., N.T. and Northern Islands (not New Guinea or Timor). Would be grateful if collectors could offer what they have and state prices wanted plus postage to Clarence Kiel, Box 7009, G.P.O. Sydney.

R. E. TRENERRY

"TREMORVA ORCHIDS"

8 BELLAMBI ST., NORTHBRIDGE

Gives an invitation to all interested in growing orchid plants under cool conditions. See the large range of genera that will grow and flower without heat.

Inspection Saturday afternoons or Sundays. Nobody asked to buy. Bring your problems and discuss them.

ORCHIDS

In all kinds

Seedlings and mature plants

Catalogue free on application.

MARCEL LECOUFLE

1. Rue de l'Eglise

BOISSY-ST-LEGER

S & O FRANCE

Visitors always welcome

DECAYED WOOD ORGANIC COMPOST

This compost is made in accordance with the formula published in the Australian Orchid Review. It is ready for use without further additions and has been successfully tried and proven over a period exceeding 5 years.

THE PLANTS DEFINITELY REQUIRE NO FURTHER FEEDING AT ANY TIME

PRICE 35/- per cwt. ex-nursery

NURSERY SUPPLIES

18 BUENA VISTA AVE.

DENISTONE. WL3180

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.
MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

ORCHID AND GARDENING BOOKS

ORCHID GROWING FOR EVERYONE (K. Matho), col. plates, £2.1.6d. Post 1/6d.

VENEZUELAN ORCHIDS ILLUSTRATED (G. Dunsterville & L. Garay). Vol. one, £6.16.6d. Post 5/-.

EXOTICA 2 (A. Graf) over 7000 illst. including Orchids, £14.19.3d. Post 11/-.

ORCHIDS (M. Riehl), col. plates, £3.2.0d. Post 1/9.

ORCHIDS, THEIR CULTURE & CLASSIFICATION (P. A. Gilbert), illst., £2.2.0d. Post 2/-.

THE ORCHIDS—A SCIENTIFIC SURVEY (C. L. Withner), illst., £9.11.9d. Post 5/-.

ORCHIDS ARE EASY TO GROW (Logan & Cosper) col. plates. £3.15.0d. Post 2/3d.

SANDER'S LIST OF ORCHID HYBRIDS ADDENDUM 1946 to 1948, ¾-leather, £2.9.9d. Post 1/6d.

SUCCESSFUL ORCHID CULTURE (P. R. C. Rittershausen), illst., 18/9d. Post 1/6d.

PLANT PROPAGATION (Witham Fogg), illst., 6/- Post 6d.

U. C. SYSTEM FOR PRODUCING HEALTHY CONTAINER-GROWN PLANTS (edited K. F. Baker), illst., 17/3d. Post 2/-.

SEED & POTTING COMPOSTS WITH SPECIAL REFERENCE TO SOIL STERILIZATION (Lawrence & Newell), illst., 15/9d. Post 1/-.

CULTURAL TABLE OF ORCHIDACEOUS PLANTS (J. Muray Cox), col. & b/w plates, £4.4.0d. Post 3/-.

COLOMBIAN ORCHIDS (M. O. Hernandez) English text, col. & b/w plates. £6.4.0d. Post 5/-

We search the world successfully for Rare and Out-of-print Books.

Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.

We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.

10X British Achromatic Folding Magnifiers—of great use to Botanists. £3.11.6d.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L. C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

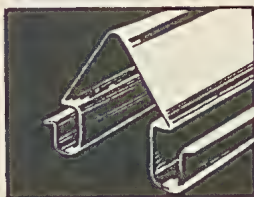
Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION

GALVANISED RAIL FITTINGS



Clips or Tees	No.	Rail Standard	Price
	107	$\frac{3}{4}$ x $\frac{3}{4}$	1/10 ea.
	108	1 x $\frac{3}{4}$	1/10 ea.
	109	1 x 1	1/10 ea.
Corner Fittings	186	$\frac{3}{4}$ x $\frac{3}{4}$ x $\frac{3}{4}$	4/6 ea.
	180	$\frac{3}{4}$ x 1 x $\frac{3}{4}$	4/6 ea.
	181	1 x 1 x 1	5/3 ea.
Crosses	106	$\frac{3}{4}$ x $\frac{3}{4}$	3/2 ea.
	105	$\frac{3}{4}$ x 1	3/2 ea.
	104	1 x 1	4/5 ea.
Knobs	155	1	1/8½ ea.

$\frac{3}{4}$ Galv. Pipe	1/0½ per ft.
1 Galv. Pipe	1/5 per ft.
8' Galv. Blazing Bars	6/- per len.
Glazing Bar Clips	5/- per 100.

16 x 14 x 21 Horti- tural Glass 64 sheets to case = 100 sq. ft.	93/3 per sq. ft.
Loose extra	

**SWANS
LTD.**

SYDNEY
PARRAMATTA
HURSTVILLE
CHATSWOOD
WOLLONGONG

406/410 Elizabeth Street
49 Aird Street
135 Forest Rd.
732 Pacific Highway
67/69 Burelli Street

B0931
YL0681
57 0311
JA3462
B3301

UNSURPASSED QUALITY
ORCHIDS

by
(P. F. & F.)

VACHEROT & LECOUFLE

AUTUMN AND WINTER SPECIAL
OFFERINGS

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings
C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

"La Tuilerie"—Rue de Valenton
BOISSY ST. LEGER, SEINE & OISE
FRANCE.

Telephone: 42 Cables: VALEC
Boissy St. Leger.

ODONTOGLOSSUMS
ODONTIODAS

and allied genera in great variety are available
to you from the

CHOICEST STOCK IN THE
WORLD

HIGH QUALITY MODERN
HYBRIDS

in a wider colour range than exists in any other
generic group of orchids.

NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

Orchids From India

All flowering size.

Aerides Lawrenceae
Rhynchostylis Retusa
Phaius Wallichii

Yellow & purple. Tipped with green	40/- each
Waxy white with pink spots.	30/- "
Orange yellow with reddish purple	30/- "

AIRFREIGHT EXTRA.

FLOWERING SIZE

KIRKWOODS ORCHIDS. 342 SHERIDAN ST., NORTH CAIRNS. NTH. QLD

Send for general price list of other orchids.

BIOGEN-ELECTROLYTES

For

Healthy Disease Resistant Plants

Literature Free on Request

BIOGEN PRODUCTS CO. PTY. LTD.

43 Liverpool Rd., SOUTH STRATHFIELD.

Phone: YB1691

Obtainable in Victoria from

G. A. SAUNDERS

195 Glenferrie Rd., GLENFERRIE, VIC.

LUGARNO WOOD FIBRE ORCHID COMPOST

Composted and Pasteurized by the latest scientific techniques described in this journal and overseas. All composts manufactured in our own indoor commercial and composting pasteurizing rooms.

WEED AND PEST FREE!

Supplied in three bushel polyethelene lined bags.

Prices, delivered freight paid ALL STATES. OVERSEAS orders at N.S.W. prices plus cargo ship freight rates.

	N.S.W.	VIC.	QLD.	S.A.	W.A.	TAS.
1 x 3 bushel bag	25/-	44/6	45/6	46/9	60/-	60/-
2 x 3 bushel bags	50/-	76/-	78/9	81/6	106/6	106/6
3 x 3 bushel bags	75/-	107/6	109/-	113/6	152/6	152/6

Substantial discounts for ten bags or more.

LUGARNO INDOOR PLANT POTTING MIXTURE

(Not suitable for orchids)

1 x sugar bag 10/6 } 1 x 3 bush. bag 22/6 }	Free delivery SYDNEY and suburbs. Country, Interstate and overseas orders freight on.
--	---

STERISOIL: for sterilizing home made composts.

1/- fl. oz., or 68/- gallon. Freight extra.

ALL ORDERS AND TRADE ENQUIRIES TO:—

LUGARNO MUSHROOMS

917-919 Forest Road,

LUGARNO, SYDNEY, N.S.W., AUSTRALIA

Telephone: SYDNEY: 53-9377

Cables & telegrams: MUSHROOMS. LUGARNO, N.S.W.

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editors: G. H. Slade, Box 13, Homebush, N.S.W., A. B. Porter, 14 Henderson Rd.,
Eastwood; A. R. Persson, Coronation Ave., Mosman.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

President: E. A. KNOBLAUCH

Patron: Sir JOHN B. CHANDLER

Honorary Secretary: K. McKENRY, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

Patron: His Excellency The Governor of Victoria, General
Sir DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Patroness: Lady BROOKS

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets First Thursday: Royal Society Rooms, Institute Building, North Terrace and
Kintore Ave., Adelaide.

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: N. CHRISTOPH, 18 Clinton Avenue, Myrtle Bank.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

Patron: Sir ROSS McLARTY, Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Secretary: H. E. Foote, 12 Ryrie Ave., Como.

Treasurer: C. W. O'Connor, 42 Birkett Street, Bedford Park.

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Cross.

President: F. W. Chilvers.

Hon. Secretary: Mrs. R. F. Gee,

16 Montagu Street, Lenah Valley, Hobart, Tasmania.

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

FESTIVAL
ISSUE

Australian Orchid Review



PUBLISHED QUARTERLY

VOLUME 25, No. 3

PRICE 3/6

SEPTEMBER, 1960



COELOGYNE PANDURATA

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE
QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID
CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA,
AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

Orchids and Orchid Supplies

A splendid range of all types of Orchids suitable for Bush and Glass House culture is always available.

AUSTRALIAN RAISED CYMBIDIUM SEEDLINGS 15/- and £1.

TOP LINE CYMBIDIUM AWARD AND SHOW VARIETIES. Also some of the WORLD'S FAMOUS STUD PLANTS including ROSANNA PINKIE FCC RHS, RIO RITA RADIANT FCC RHS, ICARIUS EXBURY AM RHS. NAMKHAN, NAOMI, DANTE FCC RHS.

VANDAS. Top Line HAWAIIAN CROSSES including NELLIE MORLEY, JOHN NOA'S 512 CROSS.

PHALAENOPSIS. Specimen Plants in First Class Whites. Flowering Size Plants of MISTINGUETTE (ROTHMAGO X HELLE). First Class Pinks.

CATTLEYAS. Large Selection of Flowering Size Plants and Seedlings.

CYPRIPEDIUMS. Big Selection of Hybrids and Species.

DENDROBIUMS. Hybrids and Species.

COELOGYNES, ONCIDIUMS, BRASSIA BRACHYATA, ODONTOGLOSSUM-GRANDE, ZYGOPETALUM-MACKAYI, STANHOPEA-TIGRINA, LAELIA ANCEPS and many others for Bush House culture in and around Sydney.

JAPANESE OSMUNDA FIBRE 3/6d. lb. AUSTRALIAN TODEA FIBRE 3/- lb. TREE FERN SLABS 4/- each. ATLAS FISH EMULSION 13/6d. pint.

TAN BARK, PEAT MOSS, READY MIXED COMPOST, PEARLITE, SPHAGNUM MOSS, WISS ORCHID SHEARS 32/6d. (Postage 9d.). MONARCH INSIDE HOUSE FOGGER 23/- (Postage 1/-). RICE HUSKS, 7/- per Corn Sack.

N.S.W. Agent for WALDOR GLASS HOUSES. These houses are in use at the Nursery and may be inspected there.

Plants sent to Anywhere in Australia and Overseas on request.

Please send 5d. Stamp for Price List.

OPEN SEVEN DAYS A WEEK

Frank Slattery

Phone

LY7985

12 EDDYSTONE RD., BEXLEY

(off Stoney Creek Rd., opp. Bexley Park)

Phone

LY7985

Phalaenopsis

Doris



*You are now able to purchase your PHALAENOPSIS seedlings at dos pueblos.
These are all healthy well grown plants.*

Grace Palm x self

£2. 5. 0.

10% discount allowed on quantities of 12 or more plants in any one order.

MISCELLANEOUS ORCHIDS

Cattleya schilleriana

Miltonias spectabilis var. moreliana

Cattleya loddigesii

Huntlea meleagris

Cattleya walkeriana

Bifrenaria tyrianthina

Catasetum pealeatum

Stanhopia graveolens

*Have you tried dos pueblos famous ready mixed compost with nutrients added;
no crocking of pots needed with this compost.*

We have a large range of orchid growers requirements always in stock.

FREE DELIVERY IN METROPOLITAN AREA



Orchid Company
(AUST.) PTY. LTD.

DEE WHY

Situation: South Creek Rd., Dee Why, N.S.W.

Mail orders are
carefully filled.
Inquiries are
invited.

Telephone:

98-6321

P.O. BOX 90

N.S.W.



R a m b u n c t i o u s S e e d l i n g s

are driving us out of glasshouse space—so we offer this choice selection of community seedlings from our world-renowned crosses. Ready for 2½ or 3" pots. Innumerable community seedlings purchased "yesteryear" are now winning our customers the highest awards.

- 2083 Lc. BERNICE FARRELL (Lc. Bacchante 'Burgundy' x Lc. Princess Margaret 'Magnifica'). Prolific, large, dark, controllable. Fall.
- 3226 (C. Harrisoniana 'Robert' x Lc. Mary Rose 'Exquisita' A.M., A.O.S.) C. Harrisoniana contributes substance, outstanding keeping qualities. 4 to 6 flowers per stem. Fall, variable.
- 3346 (Lc. Golden Gate x C. Harrisoniana). Strong bifoliate, medium size, pink to peach, long lasting. Summer.
- 3435 (C. Dorothy Mackaill 'Shasta' x C. Bengrave). Very productive White with orange-yellow throat. Spring.
- 3636 (Lc. June McQuiston 'Incentive' x Lc. Vanity 'Conceit'). Excellent large white with good dark labellum. Summer.

6 COMMUNITY SEEDLINGS (£4/6/2 Value) ONLY £3/8/3

Minimum—2 of any cross

SHIPPED OVERSEAS F.O.B. SOUTH SAN FRANCISCO

Write for complete community list and quantity discounts.

*Shipped out of flat
in polyethylene bags.*

*Please enclose remittance and
shipping instructions.*

Rod McLellan Co.

1450 El Camino Real, South San Francisco, Calif., U.S.A. Cable: RODCO.

PRADHAN
Exporters

BROTHERS
Importers

INDIAN ORCHIDS, FLOWER BULBS, AND 1959 NEW HYBRIDS, DOUBLE GERBERA

100	Diff. Indian Orchids—Cymbidium, Dendrobium, Aerides, and Vanda variety	10/-	per 100
6	Diff. Colour Ludwig Amarylles	16/-	" "
	Double Amarylles	10/-	" "
50	Diff. named fancy leaved Caladium	18/-	" "
	Curcuma Roscoonian	10/-	" "
	Eucharislily	4/-	" "
	Heamenthus Multifolius	12/-	" "
	Nerinlily	4/-	" "
	Zephyrenthus Sulpheria	6/-	per 1000
	Coperenthus	6/-	" "
100	Diff. colour 1959 New Hybrids Double Gerbera 7" to 8" open best quality	18/-	per 100
	Double Gerbera Seed	2/-	per 1000

Pachey Khani
Pakyong, Sikkim
India

Air Freight Extra.

Complete List and particulars upon request.

Rarer Plants

"Importers and Hybridists"

WE OFFER A LIMITED RELEASE OF VERY HIGH QUALITY ORCHIDS.

CYMBIDIUM.	BURGUNDIAN 'CHATEAU' F.C.C. R.H.S. 1959	£750	0	0
"	ROSANNA 'PINKIE' F.C.C. R.H.S. 1931	150	0	0
"	RUNNEMEDE F.C.C. R.H.S. 1951	250	0	0
"	PRINCE CHARLES 'PINNACLE'	350	0	0
"	MADONNA 'ICEBERG.' A peerless pure white self	100	0	0
"	TINSEL 'BROCADE' A.M. R.H.S. 1951	250	0	0
"	ROSINANTE 'PERFECTION PINK'	350	0	0
"	BULLFINCH EXBURY A.M. R.H.S. 1948	50	0	0
"	MIRETTA 'MATCHLESS' A.D. O.S.N.S.W. 1958	10	0	0
"	ARGOSY 'ARISTO.' Superb Yellow	500	0	0

P.O. BOX 18, KILLARA N.S.W.

Telephone: JX2698

FOR FURTHER DETAILS PLEASE INQUIRE.

SHADING PROBLEMS SOLVED FOR YEARS TO COME.

LUMITE SARAN SHADE CLOTH

Lowest annual cost.

Widest range of economy shading.

ORCHID GROWERS:

Whatever your shade problem may be—if you are a Cymbidium grower and need to cover your bush house or outdoor beds, or if you GROW ORCHIDS UNDER GLASS, you will find Lumite Saran shade cloth ideal for the specific shade desired.

Instal it and forget it . . .

it will last for years.

We are Australian agents for this fabric—we invite your inquiries—contact us for samples.

dos pueblos

Orchid Company
(AUST.) PTY. LTD.

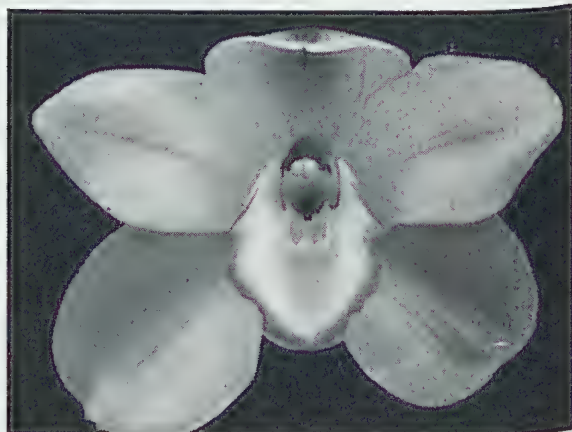
Box 90 P.O., DEE WHY, N.S.W.

'PHONE 98.6321

San Francisco

'Maiden Lane'

FCC AOS FCC ADC



Dos Pueblos offer you the following top quality Cymbidium seedlings which are consistently producing award standard flowers.

D.P. 4030 MAXINE, Dorchester Alpha x Rosanna Pinkie FCC/RHS

Many show winners, beautiful white flowers from this cross.

D.P. 4033 JUDY, Rosalita Dos Pueblos x Rosanna Pinkie FCC/RHS

D.P. 4046 JUDY, Rosalita Dos Pueblos x Rosanna Pinkie FCC/RHS

The consistency of this cross is outstanding, pink flowers of good shape and texture.

D.P. 4036 ANN GREEN, Rosanna Pinkie FCC/RHS x Babylon Castle Hill FCC/RHS

Here is a cross of top quality parents which we recommend.

D.P. 4074 Flamingo Nobilior x Babylon Castle Hill FCC/RHS

Producing round flowers with plenty of substance.

D.P. 4093 PRINCE CHARLES, Balkis Perfection x Pauwelsii Compte d'Hemptine FCC/RHS

Here we have a remake of this famous cross. We feel sure it will prove even better than the original.

D.P. 4150 SAN FRANCISCO, Balkis Perfection x Blue Smoke Sea Green

For pastel green flowers of beautiful shape you must include this cross in your collection.

The above are all large well grown plants. For quality and size they are unsurpassed.

dos pueblos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Telephone:

98-6321

P.O. BOX 90

Situation South Creek Rd., Dee Why, N.S.W.

Country visitors
especially invited
to visit our
Nursery.

N.S.W.

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L. C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

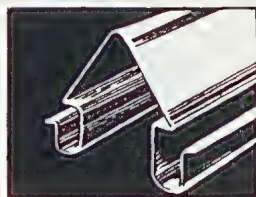
Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive Lists sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION

GALVANISED RAIL FITTINGS



Clips or Tees	No.	Rail Standard	Price
	107	$\frac{3}{4} \times \frac{3}{4}$	1/10 ea.
	108	$1 \times \frac{3}{4}$	1/10 ea.
	109	1×1	1/10 ea.
Corner Fittings	186	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	4/6 ea.
	180	$\frac{3}{4} \times 1 \times \frac{3}{4}$	4/6 ea.
	181	$1 \times 1 \times 1$	5/3 ea.
Crosses	106	$\frac{3}{4} \times \frac{3}{4}$	3/2 ea.
	105	$\frac{3}{4} \times 1$	3/2 ea.
	104	1×1	4/5 ea.
Knobs	155	1	1/8½ ea.

$\frac{3}{4}$ Galv. Pipe 1/0½ per ft.
1 Galv. Pipe 1/5 per ft.
8' Galv. Blazing Bars 6/- per len.
Glazing Bar Clips 5/- per 100.

16 x 14 x 21 Horti-
tural Glass 64 sheets to
case = 100 sq. ft. 93/3 per sq. ft.
Loose extra

**SWANS
LTD.**

SYDNEY
PARRAMATTA
HURSTVILLE
CHATSWOOD
WOLLONGONG

406/410 Elizabeth Street **B0931**
49 Aird Street **YL0681**
135 Forest Rd. **57 0311**
932 Pacific Highway **JA3462**
67/69 Burelli Street **B3301**

LUGARNO WOOD FIBRE ORCHID COMPOST

Composted and Pasteurized by the latest scientific techniques described in this journal and overseas. All composts manufactured in our own indoor commercial and composting pasteurizing rooms.

WEED AND PEST FREE!

*Supplied in three bushel polyethelene lined bags.
25/- per bag. N.S.W.*

Interstate and Overseas orders freight forward.

Substantial discounts for ten bags or more.

LUGARNO INDOOR PLANT POTTING MIXTURE

(Not suitable for orchids)

1 x sugar bag 10/6	} Free delivery SYDNEY and suburbs. Country, Interstate and overseas orders freight on.
1 x 3 bush. bag 22/6	

STERISOIL: for sterilizing home made composts.

1/- fl. oz., or 68/- gallon. Freight extra.

TRADE ENQUIRIES TO:—

SCIENTIFIC COMPOSTS (Regd.)

A subsidiary of

LUGARNO MUSHROOMS

917-919 Forest Road,

LUGARNO, SYDNEY, N.S.W., AUSTRALIA

Telephone: SYDNEY: 53-9377

Cables & telegrams: MUSHROOMS. LUGARNO, N.S.W.

Retail Sales at: **Frank Slattery**, 12 Eddystone Road, Bexley. Telephone LY 7985

T. W. Sessions, 53 Chandos Street, Ashfield.

New South Wales Distributors:

A. J. Bush & Co.

45 Parramatta Road, Homebush

Telephone: 76-0356

Arthur Yates & Co.

Sussex Street, Sydney

Telephone: 29-6771

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cypripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

The Largest Raisers of Cymbidiums in Australia

30,000 Seedlings always in Stock

All plants hybridised and grown in our own nursery.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 15/- to 20/-	} ex Nursery
in 6" pots from 25/- to 30/-	

Early flowering and exhibition crosses always available. Divisions and full clones of flowering plants now available.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Will be open all week-ends for inspection of seedlings in flower.

Our seedlings are also available at list prices from Mr. F. Slattery, Bexley, and Mr. H. Bond, Marmong Point, Teralba.

WONDABAH ORCHIDS

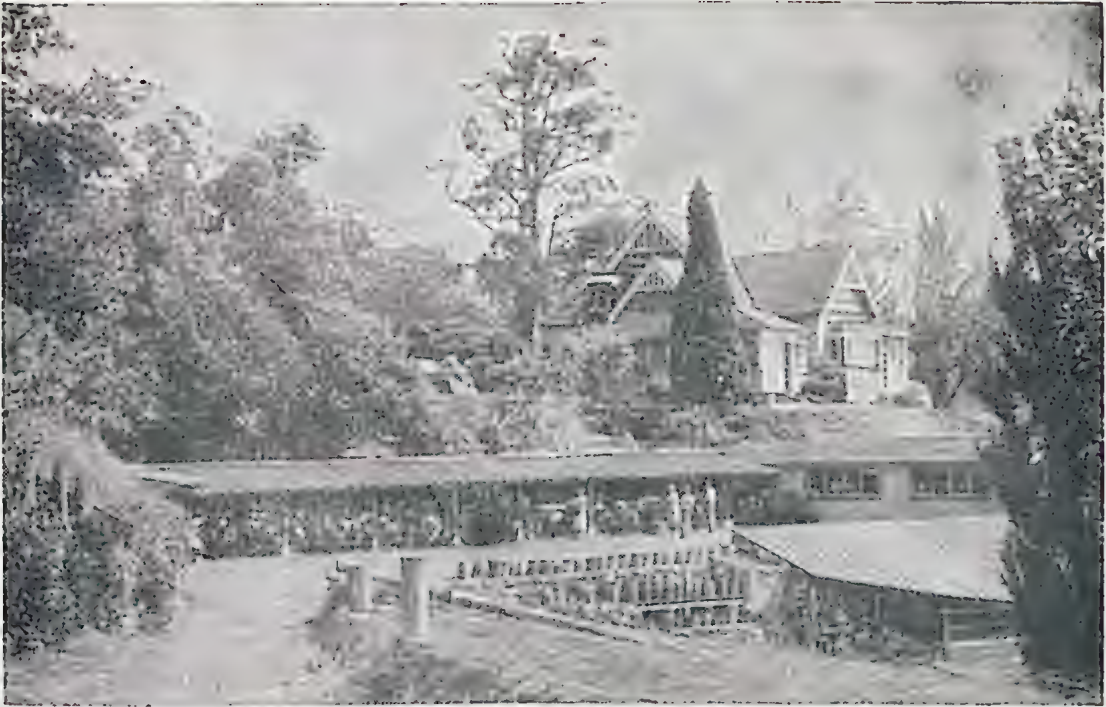
724 Pennant Hills Rd.

Carlingford, N.S.W.

L. Giles & Sons
Sole Proprietors

Tel. WM2959

Roy Deane Invites You to See Beautiful Orchids and Indoor Plants at "GREENACRES" Orchid Farm



There's a treat in store for orchid fanciers at Roy Deane's magnificent orchid farm where a wonderful display of Cymbidiums now flowering on the "Greenacres" hillside provide a breath-taking spectacle.

Meet and talk with Roy Deane on the cultivation of these exquisite blooms. He will gladly answer all your questions and give full advice on the growing and cultivation of orchids for home decoration, competition, exhibition and for the export trade.

Now's your opportunity to participate in the flourishing export trade of "Greenacres" orchids, and grow world-famous Cymbidiums for profit as well as pleasure. With his extensive experience as a grower and exporter of orchids to every country in the world, Roy Deane will be able to select for you the plants that produce the right blooms for export. Highest quality blooms from "Greenacres" farm are in big demand overseas . . . so profit is assured.

Accept this as a special invitation to come and see "Greenacres" great display of Cymbidiums this season. Ask for special price quotes for your individual requirements.

Wholesale and Retail Supplies

"GREENACRES ORCHID FARM"

Great Western Highway, Valley Heights

On the Lower Blue Mountains, New South Wales

Phone: Springwood 129

Phone: Springwood 129

8682

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £6.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

Flowering size English Odontiodas and Odontoglossums.
Miltonia seedlings, full flowering size, at 50/-.
Hawaiian Dendrobium seedlings of the best crosses, from 8/6
Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.
French and American Phalaenopsis seedlings, ranging in price from 15/- to £5, according to size and cross.
Interesting new Epidendrum, Diacrum and Allied Intergeneric Seedlings.
Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass SLC. Anzac.

I have a very large stock of imported Cattleya seedlings in all sizes for you to select from. These range in price from 12/6 for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house, and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges, minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

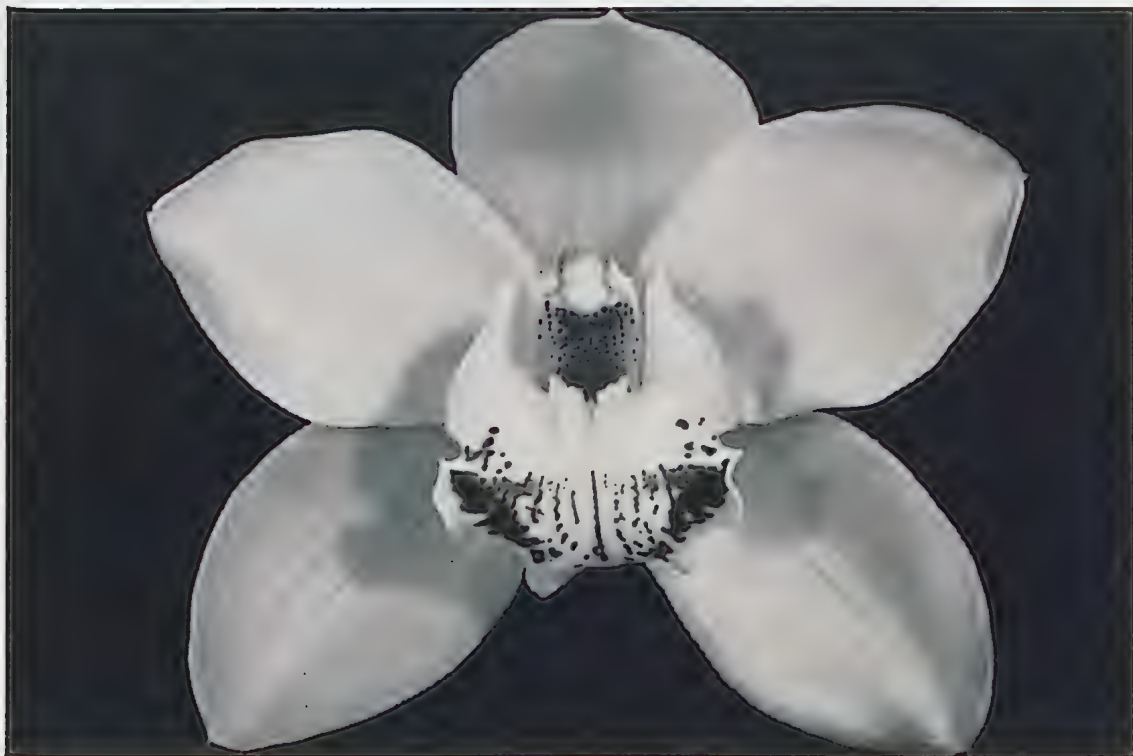
Telephone: Kellyville: 333

(Bus service from Parramatta Station stops at door)

Australia is one of the *World's Foremost*
Cymbidium Growing Centres

and Australians have come to know and insist on the World's Finest Orchids. This is why more and more growers are recognizing and purchasing superbly bred, genetically sound

STEWART BRED CYMBIDIUMS



(*Cymbidium Lillian Stewart, 'Mona Lisa'*)

New Stewart Bred Hybrids are the result of combining experience, skill, modern day cyto-genetics, and the finest possible parents to give you such superb new crosses as LILLIAN STEWART (Balkis, 'Silver Orb', AM/AOS x Carisona) (illustrated); BALI, SAN FRANCISCO, and many others that you will see and read about. If you want something beautifully different and breathtakingly better you'll want Stewart Hybrids in your collection.

We have a grand catalogue of 24 pages and illustrations we will be happy to send FREE immediately on receipt of your request. Write us. We are happy to tell you how you can receive our plants.

HYBRIDIZERS

Fred A. Stewart INC.

GROWERS

8606 E. LAS TUNAS DRIVE

SAN GABRIEL, CALIFORNIA, U.S.A.

We have a 24 page Cattleya catalogue too!

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim

Phalaenopsis.

- Phal. Lachesis x Lachesis (1147)
Phal. Amablis Lily Koster x Margaret Bean (1155)
Phal. Cendrillon x Fanchette x Margaret Bean (1154)
Phal. Lachesis x Lachesis (1130)

15/-
each 3"
across

30/-
each
6" to 12"
high

- 830 Dendrobium veratrifolia x Dend. taurinum.
964 " broomfieldii x Dend. taurinum.
772 " Hawaii Nui x Dend. stratiotes
836 " Schroderianum x Dend. taurinum
1021 " Toftii x Dend. phalaenopsis alba.
218 " veratrifolia x Dend. broomfieldii.
" Louis Bleriot (D. superbiens x Schroderianum FCC).

- 689 Vanda Miyamoto x Vanda Dearei
643 " tricolor x Vanda Luzonica.
868 " Miyamoto x Renanthera Storei
730 " suavis x Renanthera Storei
942 Arachnis Ishbel x Vanda Manila

30/-
each 6" to 12"
high

15/-
each
4" to 6"
high

- 830 Dendrobium veratrifolia x Dend. taurinum
964 " Broomfieldii x Dend. taurinum
1021 " Toftii x Dend. phalaenopsis alba
772 " Hawaii Nui x Dend. stratiotes
" Louis Bleriot (D. superbeins x D. Schroderianum (FCC).
1037 " Bali x Dend. Mauna Kea.

- 643 Vanda tricolor x vanda Luzonica.
689 " Miyamoto x vanda dearei
882 " Mary Foster x Vandopsis lissochiloides.
" flammerolle x vanda suavis.
650 " Boschii x vanda Sanderiana.

15/-
each 4" to 6"
high

Add postage and air freight.

KIRKWOODS ORCHIDS

342 Sheridan Street, Cairns North, North Queensland.

Phone: 2385

Miscellaneous Orchids

*We have the largest range of miscellaneous orchids ever offered
for sale in Australia.*

LAELIAS albida, anceps, autumnalis, gouldiana, cinnabarina, crispa, grandis
purpurata, etc.

ONCIDIUMS tigrinum, sarcodes, varicosum rogersii, marshallianum, flexuosum,
micropognum, pumilum, cheirophorum.

ODONTOGLOSSUMS laeve, citrosum, grande, Rosii, cordatum.

EPIDENDRUM vitellinum majus.

SOPHRONITIS grandiflora

CYCHNOCHES chlorochilum

BRASSOVOLA glauca, digbyana

CHYSIS bractescens

CATTLEYA citrina, bowringeana

LYCASTE skinneri, cruenta, dowiana,
candida, tricolor.

Plastic pots in sizes 2", 3", 4", 5", 6", 7", 9", 12"

Free delivery in metropolitan area

dos pueblos

Orchid Company

(AUST.) PTY. LTD.

DEE WHY

Situation South Creek Rd., Dee Why, N.S.W.

Country visitors
especially invited
to visit our
Nursery.

Telephone:

98-6321

P.O. BOX 90

N.S.W.



Top Quality Cymbidiums

Arabella, Magnificent, H.C., A.M.	Cygnus, Magnolia, H.C.	Joy Sander, Ruth, H.C.	Princess Margaret, Haberfield.
Arabella, Waverley, H.C. (twice) A.M.	Cygnus, Opalescence, H.C.	Joy Sander, Triumph.	Priam Ada Meech, H.C. (Twice).
Balkis, Burraneer (Like Luath)	Dracolan, Haberfield.	Louis Sander, Girrahween (A Champion Pastel Pink).	Profusion Violacia. (Pink Champion).
Carisbrook, Florence, A.D.	Eagle, Snow White (all white).	Louis Sander, Kirribilli A.M. (twice).	Promona Tanandra, A.D.
Cassandra, Evadne, A.M.	Esmerelda (Prize Green).	Miranda, Maisie A.M.	Sandpiper Dorothy, H.C.
Cassandra, Txoteth, A.M.	Falcon, Illawarra.	Nirvanah, Warringal, H.C.	Sussex, Laelia Sasso, H.C. (twice), A.D., A.M.
Celia, Tanandra (Prize Green—Early)	Flamingo, Allambie, H.C. (twice).	Peri, Good Big Yellow Lime Green.	Swallow, Conquest, H.C. (twice).
Ceres, F. J. Hanbury, A.D. (twice).	Girrahween, Enid, A.M., 1st Class Certificate.	Plover, No. 1 (Excellent Green).	Swallow, Daffodil, H.C. (twice), A.M.
Ceres, Girrahween, A.M.	Girrahween, Gloria, A.M.	President Wilson, Haberfield.	Swallow, Magnolia, H.C.
Ceres, Westminster, (special pink).	Gloriana, Tudor Rose, (The Champion Pastel Pink).	Princess Elizabeth, The Giant.	Swallow, Soulangiana, A.M. (twice), H.C.
Charm, Elegance, A.M., H.C. (Early).	Historian, Lindfield, H.C.	Princess Elizabeth, Reece, H.C.	Thora (late English crossing).
Cordelia Kurfingai, A.D. (Colour Champion).	Ispahan, Mascot, H.C. (twice).		
Cygnus, Janet (large, cinnamon).	Joyance, Cinnamon, H.C.		

YOUNG GREEN PLANTS: For any 6 of the above varieties, £15; 12, £25; 24, £45; 36, £60; for the whole 48 varieties as listed, £70. All plants at these prices are first-year green plants grown from back bulbs (with the back bulb still attached in nearly all cases), well-established, healthy and guaranteed.

FLOWERING SIZE GREEN PLANTS: For any 6 of the above varieties, £30; 12, £48; 24, £84; 36, £117; for the whole 48 varieties, as listed, £144. All plants at these prices are flowering size green plants comprising leading green bulbs with leads.

MAIL ORDERS: Mail Orders are Rail or Post Free; Air Freight, if required, costs £1 extra per dozen plants to points of Australia and Tasmania, or £2 extra for the first dozen plants to points in New Zealand (£1 extra per dozen after the first dozen).

"CATALOGUE AND PRICE LIST OF CYMBIDIUMS": Available free on request.

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Orchid Specialists in Australia

37 Dobroyd Parade, Haberfield (Sydney), N.S.W., Australia

C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2531

Australian Orchid Review

SEPTEMBER, 1960

VOLUME 25

No. 3

The author of each article is responsible for the facts and opinions expressed therein.

Contents

ARTICLES

Third World Orchid Conference— <i>Hermon Slade</i>	112
On Judging Cymbidiums— <i>Frank Slattery</i>	113
Desirable Cane Type Dendrobiums— <i>G. L. Piper</i>	116
Worth Observing	117
Registration of Varietal Names— <i>W. R. Smoothey</i>	118
Roof for a Bush House— <i>I. A. Butler</i>	119
Feeding and Flowering Cymbidiums— <i>B. Schwartz</i>	120
Harvesting Orchid Seed— <i>W. H. Lowe</i>	121
Spring Shows	121
In Memoriam	122
A Root-Lesion-Nematode Disease— <i>S. A. Sher</i>	127
Diploids or Polyploids— <i>L. Giles</i>	129
Round the World Ticket and an Eye for Orchids— <i>Wesley Harris</i>	130
Why I like Bulbophyllums— <i>F. R. McKillop</i>	133
My Experience in Growing Cymbidium Orchids— <i>Capt. K. A. Anderson</i>	135
Anthuriums the Unmatchable— <i>W. Englart</i>	137
Our Winter Show	138
Society News	132, 139, 140
New Hybrid Registrations	141-146
Orchid Festival	146

ILLUSTRATIONS

Vanda Tan Lou Tek	123
Cypripedium Balaclava	123
Cypripedium Tearlath	123
Cypripedium Balagrosa x Themelisa	123
Bulbophyllum grandiflorum	124
Bulbophyllum species	124
Bulbophyllum godeffianum	124
Cymbidium Rio Rita "Radiance" x Clarissa	125
Cymbidium Balkis x Shina Black	125
Cymbidium Babylon "Castle Hill" x Rosalita	125
Dendrobium Thomas Warne	126
Dendrobium speciosum	126
Coelogyne pandurata	Front Cover

Editorial Committee: G. Hermon Slade, A. B. Porter, J. C. Davis.

Please address all Editorial Matters to:

G. HERMON SLADE, Box 13, Homebush, N.S.W.

Associates

QUEENSLAND:	VICTORIA	SOUTH AUSTRALIA	WESTERN AUSTRALIA	TASMANIA
P. K. Searle Groth Rd., Zillmere Brisbane	J. N. Rentoul 43 Denman Avenue Glen Iris, S.E.6.	W. Harris 17 Old Belair Rd., Mitcham	S. P. Hall 18 Carnarvon Cres., Mt. Lawley	F. W. Chilvers 1 Lassuade Ave. Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.



The Third World Orchid Conference

G. HERMON SLADE

• The Third World Orchid Conference held in London from May 24th to June 5th, 1960, was a rich success.

The papers covered a wide range of subjects which interested both amateur and professional orchid growers. They were well delivered and were received by an audience with keen attention. It was not only the excellent papers—which covered such various subjects as “Orchids and Orchidologists”, “Today Cattleyas are easy to grow almost anywhere”, “International Trade in Orchids”, “Cymbidium judging in New South Wales, Australia”—but the atmosphere of the conference as a whole, which was so memorable.

The Royal Horticultural Society Hall was decorated by original paintings of award orchids from the earliest days. These told a story in themselves. The Hall was divided into two sections, one for those attending the lecture, the other for those meeting friends outside. The enthusiasm of the audience was manifested by a constant reminder from the wrapt attention of those in the lecture theatre to those outside to “please keep quiet!” for often the conversation of those enjoying their cup of morning tea, discussing orchids and meeting new friends became distinctly audible.

The Cocktail Party was the most enjoyable of any I can remember. There was enough of mutual interest to scarcely require the effect of cocktails and appetisers to encourage conversation; half an hour after the party began the Royal Horticultural Society sounded as animated as a cage full of budgerigars who found themselves together for the first time. One would meet people already known, or only known through correspondence, or through having orchids named after them. There were others who shared stimulatingly different or encouragingly similar thoughts to oneself; there were people from every quarter of the globe, all engaged in discussing their mutual hobby.

The weather in London was perfect. For the eight days the only clouds over London were those left by the ever-present jet planes. The sun blessed the conference from a clear sky in the lovely English summer days, which are 18 hours' long. Trips into the country by bus exuded the enthusiasm of people who were enamoured at having seen England for the first time in its magnificent park-like beauty. The

winding English roads with their attractive hedges and unexpected but often present beauty of forest-land makes a memory few can forget.

Although most were primarily interested in orchids, the Rhododendrons claimed attention. They were everywhere, some in the bushland, others in gardens, all of an ethereal beauty which captivated everyone. Large and small, colourful and delicate, these plants showed that they, too, have much of the attraction of orchids in their tremendous variation.

Visits were made to a number of private and commercial houses, all of which extended English hospitality at its best. Many learned to enjoy morning and afternoon tea for the first time, for it is the Australians and the English who are renowned for the tea rather than the coffee habit.

Orchids were not at their best, but we all know that the last month of spring is not a time when orchids make their best display. This did not reduce the interest of the Conference, for anything which may have been seen by having been in London two months earlier would have been lost had visitors not had the opportunity of seeing the Chelsea Flower Show. This magnificent annual event is so well known that few words are necessary to tell of its fascination and grandeur. The Chelsea Flower Show is an annual event for which exhibitors prepare years in advance, to culminate in a week of floral beauty which is the best of its kind in the world. Every flower lover should endeavour to see that his visit to London takes place over Chelsea week, for then will they see not only the beauty of orchids, but of the whole vegetable kingdom, staged in a way which is the result of 50 years of experience.

The World Orchid Conference was one that brings many pleasures in retrospect: increased interest in our hobby, the brotherhood of man, the beauty of nature, the charm of the homeland, homeland of our forefathers.

The next Conference has been planned to take place in Singapore. It is to be hoped that we in Australia may be able to play our part at the conference by sharing the hospitality of our country and plants at the Exhibition. Many visitors are planning to make a world trip via Australia.

—Box 13, Homebush, N.S.W.

On Judging Cymbidiums

Paper presented by Mr. F. M. SLATTERY of Sydney, Australia, at the Third World Orchid Conference, Chelsea, England, 1960.

EDITOR'S NOTE: *In connection with this paper Mr. Slattery exhibited transparencies including those of some recent O.S. of N.S.W. Awards, the Spring Festival in Sydney Town Hall, September, 1959, and a typical Sydney bushhouse.*

It was my pleasure to be present and to now record that Mr. Slattery's presentation of this paper and the wonderful reception of interest it received and created was a genuine tribute to that fine man we are privileged to know as Frank Slattery and, incidentally, to Australian orchid growers in general.

• Mr. Chairman, Ladies and Gentlemen: Let me first, Mr. Chairman, express through you my appreciation of the honour in being given the opportunity to present this paper on such a subject to this meeting with important representatives here from all the orchid growing countries of the world.

I think that there are many here to-day who are more competent than I am to deliver such a paper as this, but I am encouraged to think that much of what I will have to say will really be accepted by you as the sound practice that is universally followed by Judges with only minor local variations, while the points that may be contentious are such that we can agree to differ on them.

Sydney is the capital of the State of New South Wales which is bounded on the north by the tropical State of Queensland and on the south by the cool climate State of Victoria. On the east we are bounded by the Pacific Ocean and on the west by the desert or arid regions of Central Australia.

Sydney, with a population of about two millions, is on the coast, and most of the orchids grown in the State are grown in the Sydney area, although considerable numbers are grown at other centres. The maximum summer heat in Sydney can reach 113 degrees F. and the winter temperature can fall to 36 degrees F. The average annual rainfall is 47.5 inches, of which the major part falls in February and June. Under these conditions we can and do grow many orchids, particularly Cymbidiums, in the open, although most orchids are grown in a lath or bush house. A typical Sydney bush house has roof and walls of large mesh wire

netting lightly interlaced with ti-tree. The small leaves fall off the twigs very quickly and so intermittent sunshine and shade is afforded the plants. The use of Saran cloth and similar coverings is now occurring. I might just say at this stage that many of the plants that are flowered for export or that appear on the show bench are brought under glass for flowering purposes so that the quality of the flowers will be enhanced and they will to some extent be protected from spotting. Naturally, large numbers of new flowers are being exhibited and with improved cultural methods some of the older plants have enhanced appeal. The owners with every justification exhibit these plants seeking awards, or higher awards in the case of some of the older plants. Now, as we are some 10,000 miles from London, we believe that there is a real need, apart from anything else, for us to judge these plants where they are flowered and so we have undertaken the judging of orchids, but we are jealous of our standards and we endeavour at all times to make sure that for any award given, the flower, when judged, is to world standards. Naturally, I can only speak on judging as I know it in the State of New South Wales as each State in the continent of Australia is independent of the other States. We in New South Wales sought all the information that we could on this subject of judging before starting to judge for awards some 20 years ago. Our present practice has developed as we have grown in knowledge and experience and we have studied, where possible, the processes of judging in other countries from available literature.

With this as an introduction I will now proceed to speak to my paper which, for the purposes of convenience, can be divided under the following sub-headings: Judging for prizes as opposed to judging for awards: What are the main purposes of awards: Judging "by Points" system as opposed to "the Appreciation" method: A typical judging: Conclusions.

1. Judging for Prizes as opposed to judging for Awards

A Judge's duties, as a general rule, fall under one of two headings. Either (a) he judges for prizes at a Show or Exhibition, or (b) he judges for Awards.

Judging for prizes might be thought to be a relatively simple matter where the Judge is merely required to select the best exhibit of the particular class being judged at the time and with a little experience this, of course, is not so difficult, whether you are judging babies, dogs or Highland cattle. The position is not quite so easy as one might imagine as will appear from an examination of these cases. In judging babies the Judge will largely depend on "eye appeal" unless the organisation controlling the Show has laid down standards and conditions. If the Dog Show is run by a Canine Club there will no doubt be standards with which the Judge must be familiar before he can attempt to judge the exhibits, and in the case of Highland cattle there must be some approved way of looking at these beasts and judging their beauty or whatever else one looks for in them.

With orchids, the recognised Show Committees will require that the exhibits be judged in each class in accordance with the By-laws of the Central Governing Authority except perhaps in a few classes that have now been established, such as "The best export Cymbidium", where other factors predominate. When an orchid is to be judged in New South Wales it must be judged in accordance with the By-laws of the Orchid Society of New South Wales, which is the recognised central authority of long standing, and it is necessary that (a) the Judge has a proper knowledge of the standards of the genus in question, and (b) that he has a proper knowledge of the relevant By-laws.

As to (a) the standards are laid down as follows:

In judging for an award other than A.D. or C.C., a flower with the best general appearance on the stem shall be selected for measurement of size and determination of shape, colour and texture, provided the other flowers are of a relatively even and comparable standard.

The stem on which the flower occurs shall be judged for habit and florescence.

SHAPE of flower to be symmetrical in form, circular in outline, slightly concave and well balanced. Petals and sepals to be broad, rounded at the ends, close and evenly spaced. Hooding, furling, reflexing and any other distortions are undesirable. The labellum to be wide and fully displayed. The distal end should not turn under. Maximum, 30 points.

COLOUR shall include white or any other colour or combination of colours. It should be clear, glistening and fresh, not smudgy or

blurred. All markings and shadings shall be well defined and evenly distributed. The colour of the labellum shall be considered in assessing the general effect. Maximum, 30 points.

TEXTURE: The flower shall be of good substance, refined quality, firm, fresh, lustrous and without any blemish. Maximum, 15 points.

SIZE. Shall be measured across the visible limits of the petals and points allotted in accordance with the scale. Maximum, 10 points.

HABIT OF SPIKE. The stem to be sufficiently strong to support the inflorescence unaided. It should be long and preferably arched or may be straight but not twisted. The flowers should be evenly distributed and well displayed without overlapping or bunching. Removal of a flower or flowers shall disqualify. Maximum, 8 points.

FLORESCENCE. All or nearly all flowers on the stem should be open, and points will be allotted for open flowers according to scale, provided that all flowers shall be fully open on spikes carrying thirteen or less. Maximum, 7 points.

Scale for Size		Scale for Florescence	
	Pts.		Pts.
4½" and over	10	13 or more flowers	7
4¼" and over	9	11 or more flowers	5
4" and over	8	12 or more flowers	6
3¾" and over	7	10 or more flowers	4
3½" and over	6	9 or more flowers	3
3¼" and over	4	8 or more flowers	2
3" and over	2	6 and 7 flowers	1
Under 3"	1	Under 6	0

As to (b) the By-laws to have in mind include—

(i) a prohibition on the artificial manipulation of flowers;

(ii) an exclusion of the plant from judging if a bud or flower is missing unless the bud or flower has been accidentally knocked off in transit and is exhibited with the plant at the time of judging.

In judging for prizes the Judge takes all these things into account to determine the best plant exhibited that is not subject to disqualifications, although, of course, he is not called upon to crystallise his view on the standards to the same extent that he is when judging for an award. On the other hand, when judging for an award, the Judge disregards other plants and other exhibits. He has in mind the By-laws, the standards and his picture of the perfect Cymbidium. He judges on the flower as it appears to him at the time of judging. He is not concerned with the breeding and he is not

concerned whether or not any other plant of that genus or cross or clone has received an award. A lot of those things are something in the nature of hearsay evidence and are disregarded. On the evidence before him he judges the plant and records his vote for an award or otherwise as he sees fit and if, of course, the Panel of Judges recommends an award higher than the plant's existing award the plant gets that higher award, but if as exhibited at the time of judging this Panel of Judges recommends a lower award then no award is granted with respect to that particular judging. The plant, as such, still retains its higher award.

2. What are the main purposes of Awards?

1. To reward growers for good culture.
2. To encourage hybridists to improve species and existing hybrids either or both in form or colour.
3. To encourage hybridists to evolve new forms and colours of distinction amongst existing genera.
4. To encourage hybridists to create new worthwhile multigeneric crosses.
5. To encourage growers to improve the standard of their collection.

3. Judging by "the Points" system or "the Appreciation" method

(a) There is a lot to be said in favour of both of these systems. In New South Wales the standards I just quoted provide for points for Shape, Colour, Texture, Size, Habit of Spike and Florescence.

(b) The point system is good for training Judges as each 'factor' must be considered.

(c) It has disadvantages in that a pure glistening white *Cymbidium* of good texture $4\frac{1}{2}$ inches in size with 13 flowers on the spike but no pretension as to shape (needing only 5 points out of 30 for that factor) would get an H.C.C. We had such a case.

(b) The American system recently amended to require 75 per cent of the available points for both form and colour to be obtained before the award is granted appears to be a worthwhile step.

(e) We have tried the appreciation method for some years and not one case for real criticism has arisen either on the granting or refusing of an award.

(f) I believe that with mature Judges all the advantages of the 'points' system are achieved in the 'appreciation' system without the Judge being distracted from 'judging' by the need for any mathematical problems.

4. A Typical Judging for an Award

(a) On being submitted for judging the distinguishing labels (including ownership) are removed and the plant is given a distinguishing number.

(b) The plant is placed in the best available light.

(c) Only the Judges, Associate Judges, Registrar and Stewards are allowed to be present. A panel of not less than seven (7) Judges assembles.

(d) Discussion is permitted amongst the Judges until the Registrar distributes the voting cards—after this, if a Judge discusses the plant aloud before the judging is completed his card is destroyed.

(e) Each Judge examines the plant, the inflorescence, the flowers generally and the best flower in particular and satisfies himself that the by-laws are not infringed in such matters as artificial manipulation.

(f) The Judge has in his mind his idea of the perfect flower—its shape, the need for clear, glistening, fresh colours, the need for good texture, the relative values of size, habit of spike and inflorescence.

He evaluates the flower being judged against the standard or perfect flower. He superimposes one on the other.

(g) He marks his card knowing he can give an F.C.C. for 85 points (or better) out of 100, an A.M. for 80 points and a H.C.C. for 75 points—all in relation to a maximum of 100 points.

In addition he can mark his card for an Award of Distinction for such features as outstanding colour, or a Cultural Certificate where the plant shows evidence of outstanding culture. He can mark "No award", but is then required to state his reasons for this marking.

He signs and dates his card and hands it to the Registrar.

(h) The Registrar determines the panel's judgment by recording F.C.C. if a majority of the Judges mark their cards thus. If there is no such majority for this award any cards for it are credited to the award of A.M. and these are credited to the award of H.C.C. if necessary to establish the opinion of the majority, because our Award Judging is by the panel.

5. Conclusions

(1) In any judging a Judge will see that his conduct is in all things beyond reproach and will have regard to the standards, if any, laid down and the By-laws under which he is to

Continued on page 117

Desirable Cane Type Dendrobiums

A talk given to the Queensland Orchid Society by the President, G. L. Piper, Esq., on 13th May, 1960.

• The group commonly referred to as "Cane or Hardwood" Dendrobiums has been developed from plants found in Northern Australia and the islands of the South-West Pacific area.

The main points in their favour are strong growth, free flowering, long sprays, many flower spikes from one bulb and long lasting blooms.

The colour range includes all shades of purple, bronze, green, white and yellow. True red and blue flowers have yet to become available.

The area of most intense culture is the Territory of Hawaii. Here they are favoured by a wide range of climates which suit various types of cane Dendrobiums. Dr. Walter Carter writes of the top of the Manoa Valley with 150 inches rainfall, while four miles away on the coast it is only 23 inches.

Other places where interest is also taken are Malaya, Holland, Germany and Australia. Holland and Germany mainly grow the *phalaenopsis* types.

Broadly, there are two fairly distinct sections in cane orchids. One uses large amounts of the *D. phalaenopsis* and the other has many forms with narrow and undulating flower segments. The *D. phalaenopsis* mainly used is the variety generally known as Schroederianum. This varietal name has generally been omitted over the years and when referring to *D. phalaenopsis*, it is usually understood to refer to the large flowered plant from Amboina and the Celebes. The small flowered plant from Queensland is not commonly used by plant breeders.

Those of *phalaenopsis* type which are in demand today because of their shape, colour and size and freedom from bud drop include Louis Bleriot, Madam Pompadour, Anouk, Top Hat, Helen Fukumura, American Beauty and Lady Hamilton. Selections of the species, forms which are of great worth, are *phalaenopsis*, *F.C.C.*, Ruby and Dixon's for rich colour; while Alba, Phyllis Moore and Hololeucum are white.

This *phalaenopsis* section has two definite seasons. One is during the cool and usually dry months, when watering and feeding are at a minimum. The other part of the year, starting

in early spring, is the time of maximum growth and flower production. Size increase is achieved by liberal watering and use of fertiliser. The plants named previously, together with the others in this section are not normally prone to bud drop. In the *phalaenopsis* group some plants have flowers which last much longer than others and this is caused by the influence in their breeding of some *Ceratobium* — the Antelope group.

Probably the best known of the shapely flowers is Lady Hamilton. This has produced consistently good quality blooms. Many still show the reflexed and rounded shape of *bigibbum* which was used with Sander's Crimson to produce Diamond Head Beauty. This was then used with *D. phalaenopsis giganteum* to produce Lady Hamilton.

The most satisfactory of the whites is Dend. Mauna Kea. Mostly, it is about 3in. in diameter and white in all segments except the lip. This can have either pink or lemon at the base. Commonly grown are various forms of *Dend. phalaenopsis* which include some large and attractive colour combinations. One showy type has white sepals and a faint flush of colour in the petals and lip.

Distinct from the flowers of full shape, we have those which show strong indications of *Ceratobium* influence. Some of these are very popular and include Superbiens, Salak, Caesar, Pauline, Momi Cummins, Hawaii Nui, etc. Hawaii, although one of the oldest crosses, is still sought after, because of its rich colour, long sprays and long lasting flowers. It has a few very choice variations, particularly one called Green Gold. This has the shape and texture of Hawaii, but is pure green. Pauline is an old cross, still popular, of great beauty and probably the easiest to grow. The Java strain so far is the best, because of its long sprays and excellent colour. It has no bud drop tendency, even when flowering during the coldest part of the year. Helen Park, Louisae and Neo-Hawaii are very similar with small flowers, open, of medium lavender colour carried on long sprays and free from bud drop.

The three justmentioned, plus Pauline and Hawaii, make excellent house plants. They do not wilt easily and the long sprays are suitable

for household use, either cut or attached to the plant. They are useful for personal wear, as even the smallest lady can wear them without looking ridiculous.

Momi Cummins, Guadalcanal and Jacqueline Thomas all have great colour variations. This is caused by the *gouldii* in their breeding. *gouldii* is generally of bronze to yellow flowers, rather shortened spikes, heavy texture and the plant is a strong, compact grower.

Caesar is a very large flower of four and a half inch span, created by using *Dend. phalaenopsis* and *stratiotes*. The shape is very open and the flower is of heavy texture. Colour is usually light lavender, but there are some with all-white flowers, except for the lip. These are very striking and in great demand.

Sander's Crimson, or Bali, as we know it here, is very variable in colour. Some of the dark forms with the greenish throat are very choice. Bud drop is a serious problem with both Caesar and Bali and many others such as Rose Marie, Hawai Nui and Lynette Ito.

There are many more *Dendrobiums* than those I have mentioned, including such commonly used species as *veratrifolium*, *gouldii*, *d'Albertsii*, *tokai*, *leporinum*, *mirbelianum* and *schulleri*. *D. schulleri* when used with Hawaii Green Gold has produced the attractive green May Neal.

Cane *Dendrobiums* having large amounts of *Dend. phalaenopsis* in their breeding should be potted in small pots. These dry out more rapidly than those which contain large amounts of compost. It is easy to wet a compost, but not to dry it. Plants with large amounts of *Ceratobium* in their breeding usually have thick roots and can stand moister conditions.

Composts are mostly of fern fibre or bark. The size of the pieces varies as the plant size or thickness of the roots.

Plant food can be organic or inorganic in origin. Care should be taken when using solutions of chemical salts not to exceed the recommended dilution. Organic foods are commonly dried blood, bone meal and chicken manure. These foods are scattered over the top of the compost and watered in. Food is usually supplied in more numerous applications during the warm months and reduced considerably during the winter. Plants should not be grown without glasshouse protection, where outside temperatures are likely to be below 60 deg. F. However, there are a few types originally found in the highlands of New Guinea which

do not appear to suffer from cooler temperatures than 60 deg. F.

They could well be called Cane Orchids as *D. spectabile* has pseudo-bulbs often three feet long and one and a half inches thick. Other desirable species from New Guinea are *atroviolaceum*, *macrophyllum*, *forbesii* and *magnificum*. These orchids of the section *Latourea* and their hybrids are already causing great interest in plants which have not yet reached the height of popularity. When the peak is reached, it will, I think, be found that the South-West Pacific area with its sections of *Phalananthe*, *Ceratobium* and *Latourea* dominate.

—G. L. Piper, 13/5/60.

WORTH OBSERVING THAT FINAL E

• In all animal and botanical names a final E is always pronounced. Although this happens rarely in English, there are some words like hyperbole, pronounced hy-per-bo-lee, in which the final E is also pronounced.

Remember, then, there is no silent E in botanical names; some examples of Orchid generic and specific names are:

Coelogyne	Cel-og-i-nee
Lycaste	Ly-cas-tee
nobile	no-bil-ee
senile	sen-i-lee
crassinode	cras-si-noad-ee
moniliforme	mon-ili-form-ee
spectabile	spek-tarb-il-ee
grande	grand-ee
affine	af-fin-ee
ciliare	cil-i-ar-ee
humile	heum-il-ee

Continued from page 115

judge, then with a picture of the perfect flower in his mind he will proceed to judge on the evidence available before him and only on that evidence.

(2) Where differences occur between the methods of judging that are adopted in various countries those differences are not so very great that we, the orchid growing people of the world, can't get together and decide that the interests of orchid culture would be best served by the adoption of uniform standards so that if a plant received an award in any part of the world growers in every other part of the world will be in a position to evaluate the plant in terms of these uniform standards.

I thank you for the courtesy you have all extended towards me.

Plan for Registration of Varietal Names

W. R. SMOOTHEY, Hon. Registrar, O.S. of N.S.W.

• It is a generally accepted rule in the giving of varietal names to plants that that distinction will be reserved to those plants of any cross that merit the distinction and in fact obtain an award of a recognised society. Exceptions have developed over the years in a number of branches in horticulture and in the case of orchids we are all aware of many very fine plants that have not received awards but are very widely known by reference to a varietal name. By way of illustration only I refer to "Porter's" Green Lucy. As this tendency appeared to be increasing a very worthwhile suggestion was made by the Gosford and District Orchid Society, namely, that a Register should be established of varietal names for orchids. It was expected that this might prevent confusion or deception and would be completely independent of any question of awards. This suggestion was debated at the Conference of Affiliated Societies convened by the Orchid Society of New South Wales early this year and it was resolved that, having regard to the considerable merit in the suggestion, such a Register be established by the O.S. of N.S.W.

The Committee of Management of the O.S. of N.S.W. has given considerable thought to the details involved and the underlying principles will be as follows:—

- (1) Registration will be available to all orchids flowered for the first time in New South Wales on or after 1/1/1960.
- (2) The applicant can choose his own varietal name and this will be reserved to the applicant provided it has not been already allotted or is not generally accepted or recognised in relation to the plants of a particular grower. Such generally recognised names include "Balmoral", "Bexley" "Rapallo", "Beryl Jean".
- (3) Application will be made on a simple form which may be obtained from the Secretary of the O.S. of N.S.W. or the Assistant Librarian, Mr. A. A. Johnson, of 9 Heblet Street, Chiswick. In the form the applicant is required to give particulars of the cross and the size and colour of the flower. The colour will, of course, be stated fairly generally and in measuring a flower or its seg-

ments one only measures the "visible" part. That is, the flower or part is not flattened or unfurled.

- (4) To assist in the identification of plants registered the applicant will have to obtain a colour transparency of the flower and for the purposes of uniformity it would be desirable that this be on "Kodachrome" and that the photograph be taken in even well diffused light and not strong sunshine.
- (5) The application accompanied by a flower or the plant must then be submitted to one of the following—
 - (a) the Assistant Registrar of the Society,
 - (b) a Judge of the Society, or
 - (c) A Country Judge of the Society.

Any one of these people will verify the details furnished by the applicant, certify the particulars and forward the application to the Assistant Librarian.

- (6) The obligation will be on the applicant to forward to the Assistant Librarian a suitable transparency within twenty-eight (28) days of the application. If the application is accepted it will be registered and the Assistant Librarian will furnish a certificate to that effect to the applicant.
- (7) The fee to cover the registration is £1 1s. 0d. and this will have to be forwarded to the Assistant Librarian with the application.

In dealing with this matter you will realise that the intention is to try and assist the orchid growers generally and at the same time establish a measure of recognition to those growers who so constantly assist in the advancement of orchid culture by the introduction, the creation or the growing of new plants. The Committee of the Orchid Society of New South Wales has, of course, retained the right to reject any application and if that is done the registration fee will be returned to the applicant. This course would as a general rule only be adopted if the flower and the transparency was not of a quality acceptable for this purpose and it is emphasised that if you have a flower that would in your view qualify for registration, please look at it critically and see whether the colour is clear and the form for the particu-

lar genus is good and you must remember that by registering it you are identifying it with yourself and you primarily have to be satisfied that it is worthy to be identified with you.

From the vast number of seedlings that are now being grown from carefully selected parents it can be confidently expected that many new award plants will be flowered during this year and the succeeding years, but a great many more plants will either not be exhibited for

awards or will for one reason or another not be eligible for an award but will be of such a quality that the registration of a varietal name associated with you as the grower will be quite important.

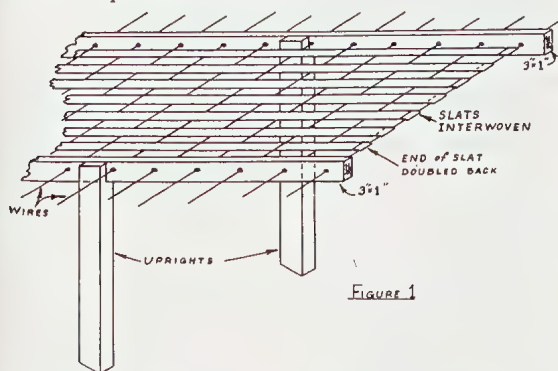
It is only fair to say in conclusion that the registration of such a varietal name for any plant will not affect one way or another the plant's prospects of obtaining an award in this Society.

Roof For a Bush-House

I. A. BUTLER

• There is a lot to be said for an aluminium slat roof for a bush house. It is easy to erect, attractive in appearance, adaptable and as durable as one is ever likely to need in this uncertain adventure of bush house building.

Some method is needed to hold the slats in place and the best seems to be to weave them through cross wires. Nailing is no good. The wire needs to be easily tightened without too much straining and to keep straight without waves. About 14 gauge seems to fill this bill. Holes to carry the wire can be drilled through 3 x 1 hardwood boards nailed to vertical up-rights. See Fig. 1. Space between the boards can be up to six feet.



The wires need to be somewhat closer than you might hope at first and a fair amount of hole drilling has to be done. Six inches apart gives quite a strong structure, but you could probably get away with just a little more. If they are too far apart the slats slip and rattle in the wind. The slats themselves are 2in. wide so that with spaces of 2in. between them you will get half the sunlight, a proportion usually accepted as satisfactory for Cymbidiums. An inch or so of the end of each slat can be bent over the last wire to make a neat finish.

If there should be any tendency for them to move in the wind a piece of tie-wire can be used to hold them in place at each end and perhaps once in the middle — depending on the length of the roof. It is always an advantage for the slats to run due north and south as this keeps the light and shade areas moving all the time and spreads the light evenly over the plants.

A variation of the above which I rather like is to have two layers of slats, one layer about

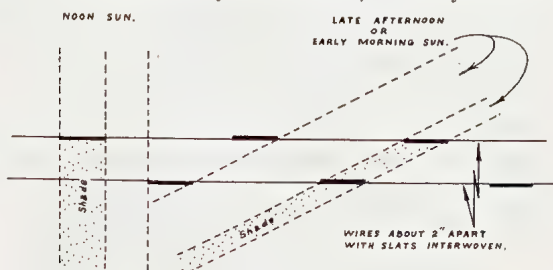


FIGURE 2

2in. under the other and with intervals of 6in. between the slats of both layers. If the slats are arranged to run north and south this method has the very considerable advantage that it provides the greatest amount of shade in the middle of the day when it is most needed and lets in more light both early and late in the day. See Fig. 2. The plan has another advantage. In the cooler weather when the plants appreciate more light the lower layer of slats can be slipped across so that each lower slat is vertically under the top slat, making the shading only 25 per cent instead of 50 per cent.

The variation doesn't need any additional materials except wire and holes for it to go through and both of these are inexpensive. The advantages make the extra work well worth while.

—Wahroonga, N.S.W.

The Feeding and Flowering of Cymbidiums

B. SCHWARTZ

• There have been quite a number of new composts made up by various people over the past two years, with a specific desire to produce a super compost that will make the "bally" cymbids jump out of the pot. It's quite a different proposition to what it was when I first started to grow cymbids. I was told by the leading growers that "it wasn't done, old man" to introduce manure of any kind into the compost. "Why Charlie So and So used manure and looked what happened to his plants, they all finished up with mosaic and most of his plants died with black rot;" and, believe it or not, something of that sort is still being noised around to those who are gullible enough to believe it.

Bearing in mind that every living organism needs food for its existence, it would seem strange indeed to deny Cymbidiums the basic needs of life to sustain them in their cycle of growth.

When I first started growing Cymbids I little realised that they would claim a major part of my spare time. I became so interested in them that someone said quite loudly, "I should have married them."

But back to the actual compost; I tried very hard to grow them in the orthodox manner with compost freshly made up of leaf mould, tan bark, sand and charcoal, but could not get the size into the flowers and could never win a prize on the show bench; then I thought, why can't I feed them? They must be receiving a certain amount of food from the leaf mould when it breaks down and the very fact of putting leaf mould into the compost was a direct contradiction to the growers that claimed they never fed their Cymbidiums, so I thought I would try an experiment on a *Pauwelsii*. I broke a plant up and made two divisions equal, three bulbs in each. One I placed in a pot in orthodox mix, the other in an oil drum with crocks on the bottom and a great pad of cow manure placed on the crocks, on top of it I placed the plant and packed around it broken pieces of cow manure, leaf mould and tan bark.

At the end of the year there was no comparison between the two plants; the plant with the cow manure was miles ahead of the other with seven flower spikes to the other's two.

From then on I've tried to mix a compost that contains a balanced proportion of foods for the plants to assimilate.

A compost must be put down a good eight weeks before you intend to use it to pot the plants in. It's not a bit of good to make up the compost and put the plants in it the same day. It has to have time for the bacteria to work and break the compost down for the roots of the plant to be able to use the food, which should be immediately available to the root system. Thus, if the plant is put into fresh compost, there is no food available for it to use, consequently it must stay still in its growth till the food becomes available. It's similar to a person being put into a butcher's shop with stacks of food around but none immediately available.

I would not say one compost is any better than the other providing, of course, that each has a balanced proportion of nutrient in it.

There is much to be said for the new compost, rotted sawdust and fertiliser, used by many growers, who claim excellent results with it. I first saw the results of it when used by Mr. W. Potts, who raised seedlings with it. This compost was originally introduced by Mr. Dent, of Newcastle, who used it to grow super poppies.

Equally good results have been obtained by Leo Giles with his compost of oregon chips and what have you; the plants are excellent with an abundance of flower spikes.

But by far the best results have been obtained by Syd Cooke with a compost of tan bark, leaf mould, sand and poultry manure. All the talk in the world does not alter the indisputable fact proven on the show bench and the export field that the way to grow them is to feed them with a balanced diet of organic manure.

You must realise by now that the composts used are basically the same; all with excellent results, but the best results must go to the grower who has a collection that he can control and give adequate light, water and food.

One of the greatest factors in obtaining maximum growth and flower spikes is the conditions the plants are grown in. Sunlight is one of the most important factors in the growing of

healthy plants. Give each plant space enough to permit its leaves to fall naturally around it, instead of obstructing the light from its neighbour. Another point to remember is to place pots of the one size together, do not have 8, 10 and 12 inch pots growing side by side, as this will cause the smaller plants to grow spindly.

Water is another important factor; by it the food is made available to the roots of the plants; Cymbids should never be permitted to dry out, they must always be on the moist side; to sum up, never feed a sick plant; give as much sunlight as the plant can take and do not be afraid to feed the plants and, when feeding heavily, keep the water up to them.

The flowering of some Cymbidiums presents a problem for quite a few growers. Whites are quite often marred by an ugly brown stripe on the dorsal of the flower. All *whites* should be flowered under glass, which has been frosted over with whitewash. It is a mistake, in my opinion, to bring the plants under glass too soon, wait until buds are emerging from the sheath and then bring them under the glass to flower.

Greens should be flowered under glass which has been frosted with the addition of coarse hessian stretched tightly underneath the glass; it will allow ample light to penetrate through and at the same time provide adequate shade. It must be remembered that blooms must be large for the show bench and the export field and, if you provide too much shade, the tendency is to deepen the colour and cause the flower to be much smaller.

Pinks and pink flush blooms require lightly frosted glass with plenty of light being able to penetrate the glass, the added sunlight deepens the pink colours and enhances the beauty of the flower. There are some beautiful pinks available now, although earlier in the season they're conspicuous by their absence. Last year we saw some very beautiful La-Novias; Judies; Swallows and Monica Hargreaves.

Yellows and *Reds* require strong light, but not direct sunlight, as this causes an ugly brown striping on the back of the dorsal, which spoils the bloom. Glass which has not been frosted is the best to flower yellows and reds under; place over the glass wire netting and add to this light brush, so the sunlight is broken up to give suffused light rather than direct light. Flowered under these conditions, Swal-

low 'Daffodil' when flowered properly is one of the finest exports we have.

Another favourite of mine is Jason 'Marblethorpe', when flowered under clear glass, with brush on top, gives you a large flower of lime yellow colour. If flowered under frosted glass with hessian underneath the glass gives a smaller flower, but will give a clear green.

WHEN TO POT

Much has been said of late as to when is the best time to break up the plants into divisions and repot; without entering into any controversy, I'm of the opinion that from May to July is one of the best times of the year to get the major part of the potting done.

You will notice that in these months, contrary to popular belief, the plants really grow with the new leads fattening into bulbs; in fact, Cymbidiums never look better than in this particular part of the year.

—1178 Forest Rd., Lugarno, N.S.W.

HARVESTING ORCHID SEED

* Mr. W. H. Lowe writes interestingly in the March issue of the *American Orchid Society Bulletin* on the need for extreme care in handling orchid seed to reduce the risk of contamination. Briefly:

- (a) Wipe the pod before harvesting with bleaching powder solution.
- (b) Remove the pod when it begins to split. Place in an airy place to dry for a day or two.
- (c) Shake out the seed on a clean sheet of paper and fold carefully.
- (d) Store in dry screw top jar in refrigerator.

Never wrap the pod at all.

Never wrap the seed in polythene or wax-paper.

SPRING SHOWS

* In addition to those shown on page 85 in our June issue:—South Coast Orchid Society, Thursday, Friday and Saturday, 15th, 16th, 17th September, 1960. Police Boys' Club, Princes Highway, Bulli.

Orchid Society of N.S.W. Orchid Festival, Sydney Town Hall, 13th, 14th, 15th, 16th September.

CORRECTION: Western Suburbs Orchid Soc., Memorial Hall, Concord, Sept. 30, Oct 1.

IN MEMORIAM

ANDREW PERSSON

• The Orchid world, here and overseas, will greatly miss Andrew Persson, who died suddenly and unexpectedly on the 4th August.

Andrew Persson was an adventurous type of man, always looking to the future; a happy man—few of us realised he was in his seventieth year.

His adventurous spirit led him to emigrate from Sweden in 1911. He first settled in Melbourne, where he met Miss Gertrude Burge, whom he married in 1922. In the same year he came to Sydney on a holiday and, liking the climate, decided to make his home here.

He founded Ducon Condenser Pty. Ltd., from a humble beginning near Central Station. Later at Waterloo it became a sizeable company, and now at Villawood it has grown into the largest company in its field of electrical equipment.

Andrew Persson lived in Mosman for 34 years in a delightful setting overlooking the harbour, protected from the west, where he has grown orchids for 24 years. Almost from the beginning, he interested himself with the crossing, breeding and selecting of orchids. He has thus become well known both here and

abroad for his crosses and awards—the varietal name "Balmoral" being his.

He raised thousands of Cymbidiums, anticipating several years ago the present trend towards shapely "coloured" Cymbidiums, and improved early flowering varieties. Seedlings yet to flower will show his advanced thinking in this regard.

His interest in orchids was general, and his collection includes hundreds of species covering each showy genus, as well as numerous hybrids, many of which he created himself. *Phalaenopsis* was one of his special loves.

His wife, Gertrude, has shared his hobby from its inception. She has helped and inspired him always, and accompanied him to the numerous orchid meetings he attended. Andrew Persson's friends far and wide offer her their heartfelt sympathy.

The *Australian Orchid Review* loses one of its hardest working and devoted Honorary Editors, who has indeed had much to do with this issue.

The Orchid Society of New South Wales loses one of its keenest, most generous, kindly, helpful and oldest members, for he has been a member for over twenty years.

The business and horticultural world mourns the death of one of its inspired leaders.

—G.H.S. 7/8/60.

RICHARD DART

• The Orchid Society of New South Wales lost one of its oldest and most enthusiastic members when Richard Dart passed on recently. Richard joined the Society in 1941 and immediately showed great interest in the hobby. He had success in gaining awards. I can recall a cold night in August, 1944, when he and I both presented Cymbidiums for consideration by the then newly formed judging panel. He received the H.C.C. for his *Euterpe* var. Churchill, this being the first award granted by the Orchid Society of N.S.W. Other awards that came his way were *Arabella* var. Waverley H.C.C., *Rusper* var. Waverley H.C.C., *Eagle* var. Mary H.C.C.

Richard Dart showed great interest in Orchid shows and his plants won many prizes over the years.

He was one of our best hybridists and made many crosses. He realised the poor quality of the early flowering Cymbidiums and set out to improve these by hybridisation.

We will miss this fine kindly Christian

gentleman who saw and appreciated so much beauty in flowers and who derived much more pleasure in giving than receiving.—A. R. Begg.

PERCY GILBERT

• With the passing of Percy Gilbert early in July, 1960, the Orchid Society of New South Wales lost one of its original members, a Life Member, a former Hon. Editor of two terms of service, a former Judge and one of the framers of the original judging standards.

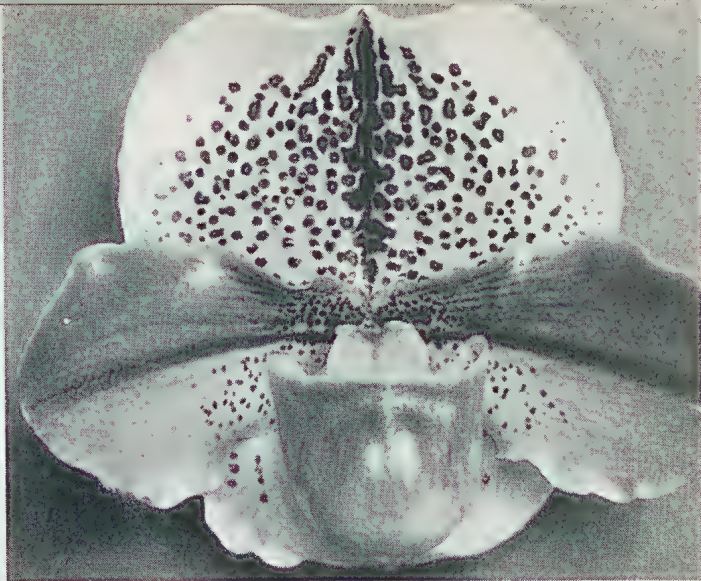
The orchid world lost a lifelong enthusiast in every branch of our hobby. His tremendous knowledge of the culture and classification of all types of orchids, from the tiny botanicals to the award Cattleyas or Vandas may be understated from his two books. First he wrote "The Charm of Growing Orchids", primarily intended for the beginner, and later a larger and more advanced work, "Orchids their Culture and Classification."

The amount of good that Percy Gilbert did for orchids in his lifetime cannot possibly be assessed.—A.B.P.



VANDA TAN LOU TEK 'Michele'

Awarded H.C.C. by O.S.N.S.W. No. 418. 30th May, 1960. Width $4\frac{1}{4}$ ". Owner, Mr. H. Burley.

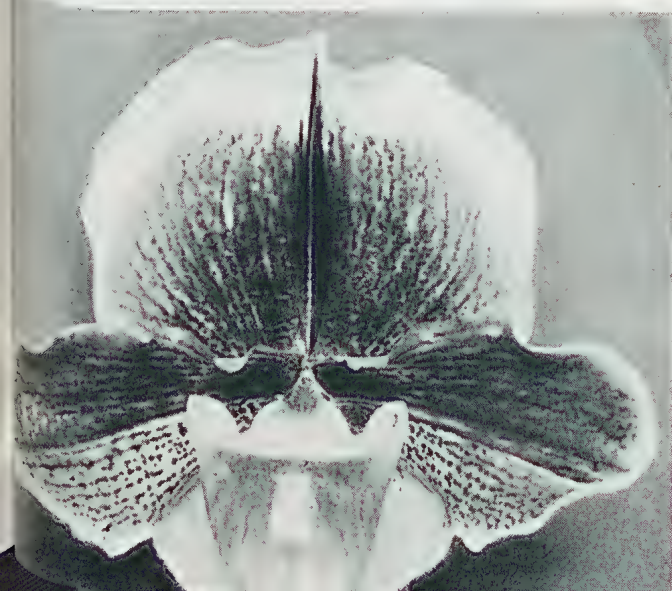


CYP. BALACLAVA 'Beret'

Awarded A.M. by O.S.N.S.W. No. 419. 27th June, 1960. Width 5". Owner, Mrs. S. Hayter.

CYP. BALAGROSA x THEMSELISA 'Beryl'

Awarded H.C.C. by O.S.N.S.W. No. 416. 30th May, 1960. Width $3\frac{1}{2}$ ". Owner, Mr. R. Trennery.



CYP. TEARLATH 'Beryl'

Awarded H.C.C. by O.S.N.S.W. No. 414. 25th April, 1960. Width $4\frac{1}{2}$ ". Owner, Mr. R. Trennery.





BULBOPHYLLUM GRANDIFLORUM

Top: One of the largest flowered Bulbophyllums: the dorsal sepal has translucent markings on a tawny yellow ground, the petals are small and inconspicuous, the lip is small and mobile. The flowers are up to seven inches across and are freely produced. See pages 133 and 134.

BULBOPHYLLUM SPECIES

Centre: This unnamed New Guinea Bulbophyllum produces curious flowers with seven inches spread from the tip of the dorsal to the base of the lateral sepals. The petals are much smaller, the lip is small and mobile. See pages 133 and 134.



BULBOPHYLLUM GODESEFFIANUM

Bottom: One of the Bulbophyllums with relatively large petals. The translucent reticulation on the dorsal sepal adds to the attraction of the three diameter flower. See pages 133 and 134.





RIO RITA RADIANCE x CLARISSA

Size 4". Grower: Judge Berne.



CYM. BALKIS x SHINA BLACK

Width 4". Grower: B. Bonnyman.



CYMBIDIUM BABYLON 'Castle Hill' x C. Rosalita

Width 4½". Colour pale pink. Owner, Lou Sasso



DENDROBIUM THOMAS WARNE

This fine white Dendrobium lasts for three months in perfection. It is an improvement on D. Nellie Sander and requires similar cultural conditions. It was raised in Honolulu.

DENDROBIUM SPECIOSUM

Grown by Mr. Crawford of Uralba, Richmond River, N.S.W. The plant had over 700 sprays of flowers. A fascinated on-looker is Mr. T. H. James of Hazelbrook, one of the foundation members of The Orchid Society of New South Wales. Photo by H. J. Cann.



A Root-Lesion-Nematode Disease of Cymbidium Orchids

S. A. SHER

Summary

• *Pratylenchus scribneri* Steiner is often found associated with a root and bulb rot and unthrifty top growth in Cymbidium spp. in nurseries in southern California. Infesting soil in which Cymbidiums were growing with two population levels of *P. scribneri* reproduced these disease symptoms. Similar plants treated with the water from which *P. scribneri* had been removed were similar in growth to untreated check plants.

A foliar nematode disease of orchids was reported in 1885 by Smith¹. In 1866 he further described this disease and illustrated the symptoms and the nematodes². Since then foliar nematodes (*Aphelenchoides* spp.) of orchids have often been reported in the literature². In 1895 de Man¹ described two species of nematodes from diseased pseudo-bulbs of orchids, but he did not consider them the cause of the disease. The first and only report of a root-lesion nematode (*Pratylenchus* sp.) from orchids is by Steiner³, in 1927, when he found one female in the roots of a *Cattleya* sp. In 1957 a nematodes survey of orchids in Hawaii revealed a *Helicotylenchus* sp. and a *Paratylenchus* sp. associated with the roots of orchid plants³.

BEAT THIS

• Pictured is an outsized *Dendrobium speciosum* grown by Mr. Crawford, of Uralba, Richmond River, N.S.W.

This orchid is growing on a tree stump. The stump is in an open garden and receives full sunshine except for the little shade afforded by some weak tree growth from the stump itself. Looking at this display is Mr. T. H. James, of Hazelwood, one of the foundation members of the Orchid Society of N.S.W. It was in Mr. James' home at Longueville that the inaugural meeting of the society was held. For many years Mr. James was the secretary of the society and editor of (and a very constant contributor to) the *Australian Orchid Review*.

The *Dendrobium speciosum* was estimated by Mr. James to have over 700 sprays of flowers. They were so dense that it was impossible to count them, very little of the growth of leaves and pseudo-bulbs was visible.

A Cymbidium hybrid plant received in 1956 contained numerous specimens of the root-lesions nematode *Pratylenchus scribneri* Steiner in the soils, roots and pseudo-bulb. Later examination of 17 potted plants from the same nursery in southern California revealed *P. scribneri* in seven plants. Cymbidium plants in eight additional nurseries in southern California were examined and *P. scribneri* was found in plants from five of them. The nematodes were found in unthrifty plants exhibiting root and bulb rots. Soil around plants exhibiting excessive root damage was often negative for *P. scribneri*, but the nematodes could often be found in the roots and bulbs in the healthy-appearing tissue adjacent to necrotic areas. As many as 3000 root-lesion nematodes (all stages) were present per gram of bulb tissue. Although this survey was concerned with examination of Cymbidium plants, six *Cattleya* spp. and five *Cypripedium* spp. plants were examined. *P. scribneri* was found in the soil and roots of one of the *Cypripedium* plants.

Other plant-parasitic nematodes encountered in this survey was a *Paratylenchus* sp., *Helicotylenchus mannus* Steiner and a *Helicotylenchus* sp.

To ascertain if *Pratylenchus scribneri* was responsible for the disease symptoms observed on Cymbidium and to measure any plant damage, the following test was undertaken.

MATERIALS AND METHODS—Forty Cymbidium hybrids, 'Michael Day', about three years old, were planted in 8in. clay pots in a 1:1 mixture of steam sterilised sand and peat moss. Ten pots were each infested with 200 *P. scribneri*, 10 pots each with 1000 *P. scribneri* and 10 pots each with 50 ml. of the water from which the *P. scribneri* were removed by washing through a 325-mesh soil screen five times, and 10 pots each with 50 ml. of distilled water. The nematodes were obtained from Cymbidium bulbs ground in a blender and placed on a modified Baermann funnel to extract the nematodes. These were poured around the base of the plants in 50 ml. of water.

The plants were randomised on a greenhouse bench and all received a complete-nutrient-solution fertiliser once a week.

One year after inoculation, observations were made on the roots and tops. Two 50c.c. soil samples from each pot were put on a modified Baermann funnel for three days. Plants were washed to remove the soil and plant weights were taken. Root samples were taken from each series and cultured for fungi. Nematodes were extracted from the roots by placing 10 grams of roots on a modified Baermann funnel for three days and bulbs were examined for nematodes by placing portions of a bulb in a watch glass and teasing the tissues apart under a dissecting microscope.

RESULTS AND OBSERVATIONS:—

The growth of plants in both groups infested with the *P. scribneri* was noticeably reduced at the end of the test. Roots of all the infested plants were necrotic or almost completely absent. There appeared to be more root destruction and less growth in the series containing 1000 *P. scribneri* per pot. Roots that were not completely destroyed had numerous necrotic lesions, in which *P. scribneri* in all stages were found. *P. scribneri* were recovered from the soil in nine of the 10 pots in the series infested with 200 nematodes per pot, and in five of the 10 pots in the series infested with 1000 nematodes per pot. No nematodes were recovered from the uninfested series (Table 1). Root and bulb samples were positive for *P. scribneri* in all the replications of the two infested series. The wet weights of both nematode-infested series of plants were significantly reduced at the 0.1 per cent level below that of the two series without nematodes (Table 1).

A *Pythium* sp. was recovered from all the root samples and was predominant in the series that received the washings and in the uninfested series. Other fungi recovered were *Fusarium moniliforme*, a *Phrenochaeta* sp., a *Trichoderma* sp. and a *Cylindro-carpon* sp.²

Only two plants flowered during this test. Both, in the untreated series, produced flower spikes of 8-10 flowers each.

The plants infested with *P. scribneri* not only were smaller and had necrotic roots and bulbs,

TABLE 1. Infestation of *Cymbidium* with *P. scribneri*.

Treatment	Wet Weight (g)	<i>P. scribneri</i> Per 100 cc Soil	<i>P. scribneri</i> Per 10 g Roots
200 <i>P. scribneri</i>	728.8**	6.6	73.0
1000 <i>P. scribneri</i>	563.4**	0.7	58.1
Washings	1272.6	0	0
Untreated	1200.6	0	0

** Significant at 0.1% level.

but also had a number of yellow leaves—outer, older leaves, which turned yellow and died. Both infested series had at least one yellow or dead leaf per plant. This condition was not present in the untreated series or the series treated with the water from which *P. scribneri* had been removed.

The absence of *P. scribneri* in some of the soil samples, and its presence in the roots and bulbs of the plants, confirms earlier observations made in a nursery survey, where soil samples were negative and roots and bulbs positive. The number of root-lesions nematodes in the soils appears to be reduced when the roots and bulbs are in an advanced necrotic state.

Department of Plant Nematology,
University of California Citrus
Experiment Station,
Riverside, California.

LITERATURE CITED

1. De MAN, J. G., 1895. Description of three species of Anguillulidae, observed in diseased pseudo-bulbs of tropical orchids. Liverpool Biol. Soc. Proc. Trans., 9: 76-94.
2. GOODEY, T., GOODEY, J. B., and FRANKLIN, M. T., 1956. The nematode parasites of plants catalogued under their hosts, comm. Bur. Agra, Para (Helm.), Bucks, England. 140 p.
3. ISHII, M., 1957. Nematodes infesting roots of orchids, Hawaii Farm Sci. 6: 10.
4. SMITH, W. G., 1885. Orchid leaves diseased. Gardeners' Chronicle. 24:731.
5. SMITH, W. G., 1886. Disease of Odontoglots caused by nematoid worms. Gardeners' Chronicle. 25:41.
6. STEINER, G., 1927. Tylenchus pratensis and various other nemas attacking plants. J. Agr. Research. 35:961-981.

ERRATA

Cymbidium Prince Charles "Pinnacle" pulished in the A.O.R. June 1960, carried the inscription: "Grower Frank Slattery." This should have read Douglas Agnew. We tender apologies to Mr. Agnew.—Ed.

The last par on page 69, June A.O.R. should be amended to read:—"The conventional glass house has overlapping panes of glass which are not sealed and consequently allow the passage of air. Therefore attempt to set up a circulation of air which will pass the greatest distance through your house."

Diploids or Polyploids

L. GILES

• With the advent of Alexanderi 'Westonbirt', Cymbidium breeding advanced in one tremendous leap from a hit or miss system to a relatively straightforward operation. By using 'A.W.' with the best diploids and some of its own tetraploid offspring such as Rosanna Pinkie and Balkis, a very good average of high class flowers is obtained. It should be mentioned, however, that while 'A.W.' is not the direct parent of all tetraploids, it is in the background of a number.

By using tetraploids as parents we find that pastel shades predominate, good shape and texture are nearly always evident, and they flower mainly in the spring. Polyploid offspring no doubt were the main reason for the enormous popularity of Cymbidiums throughout the world, both from the hobbyists' and florists' point of view. The disadvantages of tetraploid breeding are that to get perfection in flowering, they must be mainly flowered under glass, which is no trouble in countries where they have to be grown in glasshouses throughout the year. On the east coast of Australia where they are grown outside this is a considerable disadvantage to the hobbyist. Their flowering period is restricted to the spring when gardens are full of spring flowers, which means that they are not appreciated as much as they would be in the middle of winter. The weather being hotter in spring also means the lasting qualities are not as great as winter blooms and they are more subject to Botrytis spotting, which is undoubtedly influenced by the Alexanderi Westonbirt blood, as it is not nearly so apparent in other breeds.

In spite of some of the disadvantages, we look forward in the near future to getting a winter flowering tetraploid. After all, we have much more to start from than the English pioneer breeders had, with only species to work on, and we know what they attained.

We do not suggest for one minute that any collection should be without a good percentage of polyploids, however, by enumerating the advantages of diploids we hope more people will realise the value of a well balanced collection.

1. The range of colours in diploids from pure white to rich red, grass greens, canary yellows, browns, golds, in fact, every colour except blue and black.

2. The deeper colours produce their best blooms when flowered outside, in the area as they grow; but greens do want protection from direct sunlight.

3. Generally speaking, their flower spikes have a nicer habit and carry more blooms, 30 or more blooms to the spray being quite common.

4. The bulbs on the average are smaller, meaning the same size pot will carry more bulbs, hence more flowers.

5. The greatest advantage is the longer flowering period. The first diploid flowers open as early as April and the last in December, which means we can have some flowers for nine months of the year. The winter flowers last anything up to 10 weeks, which means the harvesting of blooms can be balanced to suit the whim of the owner.

We must mention that the standard of early winter flowers has to be greatly improved in shape, just as much as the polyploids have to be greatly improved in colour. However, an award was granted last year to a hybrid, Remus x Bartok, in July, which we believe is without precedent; we look forward to the time when the awards will be as frequent in June as in September; indeed, feel sure with sufficient encouragement from the various orchid societies the hybridist will reach this goal in the near future.

It is interesting to read of a well-known American grower stating that last year there was a demand for tans and golds and a keen inquiry for reds, though it was not stated whether the demand was from amateur growers or from florists.

Again from the December, 1959, issue of the *Cymbidium Society of America News*, we quote the statement made by an executive officer in charge of the flower sales of a large American orchid firm. Referring to colour demand for flowers sold there in the fall, as compared to the colour demand for Californian spring flowers, he says—"There were more calls for yellow and bronze than for pastel shades. This season there has been a great demand for greens and browns." And again, "We kept no record of the percentage of various colours, however, we were swamped with pinks."

Continued on page 132

Round the World Ticket and an Eye for Orchids

WESLEY HARRIS

• It has been my privilege in the six years I have been growing orchids to have visited other growers from most States within Australia and many more during visits to Honolulu and London for World Conferences. I have derived tremendous pleasure from meeting "big" and "little" people in the orchid world and in accepting the invitation to write about a recent "marathon" lasting six weeks. I hope, in a small way at least, to share these pleasures.

Leaving Adelaide in the wintry dawn of May 10th by 7 a.m. plane, I was laden with air tickets "west about" round our little world, hotel and private accommodation bookings, etc. A three-hour wait at Sydney Airport then off at 1 p.m. by Qantas 707 jet plane for Singapore via Darwin. At these places: Darwin at 5 p.m. and Singapore at 8.30 p.m. the weather was comfortably hot and I was glad to "call it a day" and I enjoyed visits to orchid nurseries for two days. Vandaceous genera and the terrestrial Spathoglottis enjoy tropical conditions and full sunlight. At the Botanic Gardens there was also a host of interesting botanicals. Mr. Lee Kim Hong, co-owner of a very fine nursery with his brother-in-law, Mr. John Ede—whose wives are daughters of that famous orchid hybridiser Mr. John Laycock—was proud to show me their collection and he said, "These buds you will see blooming at Chelsea in two weeks' time." At 10.15 p.m. on May 12th the Comet 4 jet plane took off from Singapore and we landed at London Airport next day at 3.15 p.m., having stopped for 45 minutes each at Colombo, Bombay, Bahrain Is., Beyreuth and Dusseldorf. This was a very long day in which watches were retarded seven hours!

Next morning I left London by Riviera Express train for Cornwall, where I spent nine days with my people and friends of my boyhood, enjoyed viewing slides of my orchids. Two of these friends, now grandparents and residing in New Zealand, returned with me to London and Chelsea Show.

My command of superlatives is insufficient to describe the beauty of this world-renowned fixture, which this year had additional exhibits of orchids from overseas. All orchid exhibits

were staged around walls of the two-acre marquee and the first on entering was by Wichmann of Celle, Germany, containing many genera and had as a centrepiece a fine display of 50 green and white *Cypripediums*, e.g., *callosum Sanderæ*, *Maudiae magnificum* and *Claire de Lune*. That of the Malayan Orchid Society was indeed an "eye opener"—a background of black velvet was employed to advantage, *Vandas* Tan Chay Yan, *Diane*, *Maurice Restrepo*, *Arandas*, *Renantheras*, etc., were all in perfect condition although they had been cut and flown half-way round the world.

It was a joy to see exhibits of the renowned, old-established English nurseries and many hybrids of the "royal orchid", *Odontoglossum crispum*, were seen; as well as *Odontiodas*, *Miltonias*, *Lycastes*, *Angulocastes*, *Cattleyas* and the tail-enders of their *Cymbidiums* (equivalent season of our late November early December). Many *Cypripedium bellatulum* blooms were seen, showing a great variety of shapes. These blooms were, in the main, on plants in very poor condition, suggesting a recent flurry of importations for this special occasion.

Four days here—often shoulder to shoulder with Mr. W. Goodale Moir "shooting" botanicals—left us feeling of "surfeit" and I felt I would never again see anything to compare with this. There were, of course, garden exhibits all different, all lovely, and displays of indoor plants—complementary to our orchid collections—where, for the first time, I saw *Tradescantia quadricolor*.

The Conference then gave four days of pleasure and included a paper from an ardent hobbyist from Iceland who had surmounted some real difficulties. He had to curtail day length in summer and simulate daylight in winter. Some speakers, whose command of English was limited, were understood with difficulty—this, too, was experienced at the Honolulu Conference.

It was a pity Australia made no application to have the Fourth World Conference held here in 1963—a Commonwealth-wide authority could have charge of such a move in future. Five countries did apply and Malaya carried about 75 per cent of the votes. This fixture,

from a global viewpoint, makes Singapore next door to us.

Visits to 12 orchid nurseries, Kew and R.H.S. Gardens rounded off conference proceedings by a truly festive dinner at the Savoy Hotel. Visits had to be cancelled to continental nurseries through sheer lack of energy so a three-day rest was the order of things. In the air again at 10.30 a.m. on June 10th, we were soon over the northern portion of the "Emerald Isle". The flight bulletin whilst over the vicinity of the Magnetic North Pole said "Cabin temperature 62 deg. F., outside temperature 47 deg. below zero, altitude 40,000 feet." We had glimpses of Greenland, icefloes, the St. Lawrence River, Quebec, Montreal and "skyscrapers" of New York. Whilst we circled and awaited the 'all clear' to land at 2.30 p.m. (local time). Then followed an interesting four-hour wait at Idlewild airport for my next "hop"—United Airlines jet to Los Angeles, California, which I reached at 10.15 p.m. local time, or six hours behind London, and this completed another long day with over 20 hours of daylight through travelling west with the sun.

Five full days in California, in which time I visited many old friends and made new ones. Dos Pueblos and that "man and a half" Joe Hampton, the Cymbidium Society picnic at Santa Barbara—then, with Dr. Bill McEwen, drove back to Los Angeles and to Stewarts Nurseries, occupying two city blocks:—100 glasshouses, averaging 100 feet each! At the invitation of the Southern California Orchid Society, I delivered a paper on "Orchids in Australia" and I felt a humble ambassador when on June 13th at Hollywood I spoke to 600 members. My slides of our native terrestrials were enjoyed: *Caladenia*, *Diuris*, *Pterostylis*, *Glossodia majus*, *Acianthus*, etc., the more so when the common names were given, e.g., spiders, donkeys, billygoat's, etc.

Driving further south, down the Pacific Highway, we saw Arthur and Hugo Freed's nursery at Malibu and more *Phalaenopsis* than I had ever hoped to see; then to B. O. Bracey and his famous "Harlequin", staying a night with Herb and Rita Crother at their palatial "hacienda" at Vista, near San Diego and the Mexican border. Next day, a trip of 250 miles—away from bush, but dried up areas, where there was a total ban on smoking in the open air, to China Lake in the Mojave Desert, where the U.S. Navy has its equivalent of our Woomera and Weapons Research Laboratories. Dr. McEwan is a physicist here and he con-

trols a fair slice of experiments. I present my passport, he vouched for my bona-fides as his visitor and I was "decorated" with a lapel pass and permitted to enter this "sanctum". Bill's orchid houses proved a most magnetic place for me for, in addition to his revolutionary flasking apparatus and technique, perfectly grown plants and exquisite *Miltonia* blooms and rare botanicals; his evaporative coolers successfully kept the temperature at 70 deg. F., which was 48 degrees cooler than outside. He keeps his "family" comfortably warm in winter, too, when 20 degrees frost is sometimes experienced.

There was certainly no risk of bush fires on this desert plateau to the east of the Sierra Nevada Mountains, where water and power are laid on from far distant sources. China Lake is dry, like some of our interior.

An afternoon flight in a Convair took me to Los Angeles for a PANAM trip of 2600 miles to Honolulu where, at 10 p.m., I was welcomed with leis and embraces in true Hawaiian fashion—by two six-foot strangers! These delightful folk, Bud Brown and his wife Helen, friends of the McEwans, had been caring for Goodale and May Moir's orchids and home. Mrs. McEwan had given them my flight number and a description—tall, greying, handsome and carrying a Qantas bag. They had recognised—the bag!!! I had no ego—I was TIRED and soaked up this luxury like a sponge as I was driven to the Reef Hotel. Next day May Moir returned, the Bakers made ready for their homeward flight to California, so we collected his cartons of plants and had a farewell dinner. I had four enjoyable days in the company of Edward Iwanaga, Johnny Nca, Bill Kirsch, Oscar Kirsch and his wife Rosa and made many purchases from them. These plants were examined and phyto-sanitary (health) certificates were attached to the sealed packages. E.W.A. International Airport is the most colourful and happy place I have ever seen. The traditional "Aloha" (greetings) are bestowed on arriving and departing tourists with leis of orchids, palmeries, carnations, etc., adorning one's neck—often up to eye level. Clothing, too, is colourful, whole families being attired—with the exception of slacks on male members—from the one bolt of cloth. My plane left at 1.45 a.m. June 21st and was at Nandi in Fiji before dawn and in spite of a 70 m.p.h. head wind from Antarctica, whose force and temperature were not noticed, we arrived in Sydney on time and I was again suitably clothed for wintry showers.

I attended the transfer of 70 kgs. of excess baggage from Qantas to our domestic airline and enjoyed Jim Lawler's hospitality for the day, returning in the evening to Adelaide, wife and family. Since then it has been a busy week of unwrapping, potting, labelling and arranging plants in my 32 mesh "Q" enclosure. No fumigation in Methyl bromide, an inspection and certificates being sufficient for Department of Agriculture; many root tips continue to grow in 60 degrees glasshouse after an open air life at Honolulu. Shippers of plant materials realise that with jet transport at high altitudes, more insulating paper wrapping is indicated, for I understand that the baggage hold under the passenger deck is not always pressurised—temperature there can be low.

In retrospect, after these fantastic travels, beautiful scenery, a six-weeks' slice of summer weather, meeting old friends and the unforeseen bonus of making many new friends, I am not yet sure if I am back to earth.

—17 Old Belair Rd., Mitcham, S.A.

• **OFFICERS OF ORCHID CLUB OF SOUTH AUSTRALIA FOR 1960:**—President: Mr. F. C. Wood, 22 Stanley Street, Woodville. Vice-presidents: Messrs. H. Harrison and R. Waye. Immediate Past President:

THE VICTORIAN ORCHID CLUB

presents

GIGANTIC ORCHID EXHIBITION

at the

PRESTON MOTORS SHOW ROOMS

104 Russell Street, MELBOURNE

Tuesday, 4th Oct. to Saturday, 8th Oct.
10 a.m. to 10 p.m. daily.

President:
G. McGraith
107 Roberts St.
Essendon
Phone: FX3570

Hon. Secretary:
Mr. Jack McArthur,
24 Somerset Road,
GLEN IRIS, S.E.6
Phone: BX1314

Mr. N. Christoph. Committee: Messrs. F. C. Bridge, J. Langdon, C. England, Mesdames C. Homes and J. Conquest.

• **ORCHID CLUB OF SOUTH AUSTRALIA:**—The Orchid Club of South Australia's Winter Show was the usual happy event at which there was again opportunity to talk orchids to members and visitors. This occasion saw fewer blooms because of the indisposition of Mr. Frank de Rose and the absence overseas of Mr. Allan McAllen.

There were exquisite blooms in many genera. A fine plant of *Cattleya schroederiae* alba with three blooms was shown by Mr. W. Waye, whose *Cypripedium Robur*, A.M., was winner of a blue ticket for best red *Cypripedium*.

Mrs. C. Howes staged a very fine array of *Cypripediums*, all well grown plants, showing many favourites. Her *Cypripedium Kirksley Pride* was best any colour and champion of the show.

Other orchids displayed were *Cypripedium fairieanum*, *Dendrobium phalaenopsis*, *Epiphrontitis Veitchii*, *Oncidium varicosum*, *Oncidium pulchellum* and *Oncidium lanceanum* and *Laelia anceps*.

Slides shown by Mrs. Conquest with commentary by Mr. Neil Christoph were enjoyed and members heard news of the London Conference and Orchid Show. We feel proud that five of our members attended it. — *Wesley Harris*.

Continued from page 129

The above, we feel sure, proves that Australian hybridists must use their initiative in hybridising instead of following the overseas lines.

On the subject of truly red *Cymbidiums*, we feel sure that the only approach is through the diploids and during this flowering season we will see some of the finest reds ever produced from the seedlings that have been available over the last couple of years. To complete your collection, you must have early flowers, also the full range of deeper colours in all their vivid beauty, remembering those June awards will come sooner or later.

Wondabah Orchids,
724 Pennant Hills Rd.,
Carlingford, N.S.W.

Why I Like Bulbophyllums

F. R. McKILLOP

• Some time ago it was suggested to me that I should endeavour to write something entitled "Why I like Bulbophyllums". The discussion continued in an exploration of the reasons why people like to specialise in collecting in a narrow field. For instance, a collector in the United States was mentioned who grows only miniature orchids, suitable for growing in lin. pots or smaller. Another collects only *Dendrobiums* of the *nobile* type.

Since then I have thought about the matter a number of times and decided that I am not in the above category at all. Yes, I do like Bulbophyllums, but I like and enjoy them for substantially the same reason that I like and enjoy orchids in general.

This does not surprise me because, when I ask myself what I find so particularly interesting about orchids I come up with the following principal points:—

(1) The Orchidaceae are almost certainly the largest family of flowering plants in existence and contain the greatest vegetative and floral variation to be found in any family of plants.

(2) To my mind the family contains the showiest individual flowers in existence as well as the most graceful, the most deicately beautiful and the most gorgeously vivid inflorescences to be found in the plant kingdom. These latter, of course, are to be found in the so-called "spray orchids."

(3) The amazing amount of specialisation and adaptions to be found in the family which never ceases to astonish as one comes across fresh examples of insect-plant, bird-plant and plant-environment inter-relationships. Of course, this is not confined to the Orchidaceae, but this family does seem to have reached the highest stage or organisation and diversity of any family of plants.

I could continue listing various aspects of the orchids which are intriguing, but it will cover the proposition adequately if I say that it is the endless variety that attracts me most of all.

Now, when it comes to Bulbophyllums, it is again the endless variety which is the principal attraction. Just as the orchidaceae are accepted to be the largest family of flowering plants, so is the genus Bulbophyllum accepted as being

not only the largest genus in the Orchidaceae, but also the largest genus of flowering plants, period. This amazing genus includes at least 1000 species presently known, distributed throughout the tropics of the world. However, it should be noted that Bulbophyllums have been less studied than most genera and that many of the regions where the genus reaches its maximum development and variation have been little explored botanically. It would not be at all surprising to me if some hundreds of additional species are proved to occur in the New Guinea area alone, to say nothing of many others throughout the large islands of Melanesia and Malaysia.

The Bulbophyllums constitute the most widespread genus of orchids as besides their main home from New Guinea to South-East Asia, there are many species occurring in Tropical Africa and a number in Tropical America. There are even a few extending northwards to Japan and southwards to Australia and New Zealand. The charm of the genus is hard to describe. Although there are some quite large and attractive species they certainly cannot compare with some other genera in sheer horticultural value. I think they are, par excellence, plants for the curious gardener with botanical inclinations. For the most part, Bulbophyllums are easy to recognise vegetatively as the genus generally has a distinctive appearance. In fact, an extraordinary number of species look almost identical in vegetative growth but produce the most bewildering variety of inflorescences and widely varying flower structures.

It is my impression that this genus has carried to its highest development the specialisation of floral structure and the inter-relationship with insects which is such a striking feature of the orchidaceae in general.

The accident of domicile has contributed to my interest in these plants as I happen to live in an area which is peculiarly rich in them. My home is on Bougainville Island, which has a rich, varied and plentiful orchid flora of the New Guinea type. Bulbophyllums constitute the largest genus here and the number of species and varieties is quite astonishing. There are species occurring at all altitudes, but the greatest number are concentrated in the zone between 3000 feet and 5000 feet.

This latter area is an epiphytic fairyland and the Bulbophyllums are its fairies. I have collected as many as a dozen species off a single tree and collecting is a simple matter in this zone as much of it is rocky and orchids grow by the million on the more stunted trees and shrubs in the more exposed places.

There are a number of large flowered species to be found and some are beautiful or striking. However, my favourites are the small and medium sized flowers of exquisite colouring and grace that I like to call the fairy orchids.

I have not been able to identify many of these and they mostly do not seem to fit any of the Sections proposed by J. J. Smith, R. Schlechter or R. E. Holttum, nor can I find anything similar in any of Smith's or Schlechter's drawings.

These plants are mostly of smallish stature, with closely clustered pseudo-bulbs and the flowers are carried on short to longish single-flowered scapes produced from the rhizome. The flowers are produced almost continuously and in very great numbers, they vary in size from $\frac{3}{4}$ inch diameter to almost two inches diameter and come in all the colours of the rainbow. One of the loveliest species bears flowers of exquisite grace and colouring which vary from 1 inch to $1\frac{1}{2}$ inches diameter, in a wide range of colour varieties, including pure canary yellow; brilliant magenta segments with snow white tips and/or stripes combined with a rich chrome yellow lip (an enchanting variety) and a bewildering variety of colour combinations made up mainly of reds, purples, yellows, violet and white. These plants flower so freely that the rhizome is always covered with a veritable forest of dead and developing scapes which are reminiscent of *Lycaste*, but slenderer and much more plentifully produced.

Another of my favourites may belong to another section as lip and petal structure is quite different, although the scape production is similar except for the much shorter scapes. I refer to this plant as *B. lycastoides* as the flower form is so reminiscent of a small *Lycaste*. The flowers are approximately $\frac{3}{4}$ inch diameter and the plant is smothered with them every few weeks. The flowers last a week or so and I have varieties in rich wallflower tonings as well as others with the same degree of colour toning from bright purple to cream and red to cream.

In addition to the little known types touched on above we have a number of species of the *B. grandiflorum* type including the rather striking *B. fritillariiflorum* which has purple tessell-

ation on a cream ground and an upper sepal 7 by 5 centimetres or more. *B. grandiflorum* itself is a very variable species as regards colouring and size of flowers and is probably the largest flower in the genus as some plants produce flowers with upper sepals in excess of 6 inches by $2\frac{1}{2}$ inches.

Section *Sestochilus* probably contains the finest species with larger flowers. These are mostly largish plants and mostly produce single flowered inflorescences of quite large and very attractive flowers. Thus *B. longiflorum* has large pink flowers with darker veining, upper sepal 53 by 9 millimetres, lateral sepals somewhat wider, petals 63 by 6 millimetres with flowers almost as large and coming in colour varieties of olive yellow and red, yellow with red spots, etc. Also *B. lobbii*, *B. maximum* and others.

Then there is the Section *Cirrhopetalum* with many large flowered species which produce characteristic graceful inflorescences of long-tailed flowers.

For those interested in the bizarre, there are the plants of the Section *Epicrianthes*, in which the flowers appear singly from chaffy bracts at the bases of the pseudo-bulbs. "The flowers are small and the petals have a broad base, the blade cleft into two diverging lobes almost to the base, each lobe bearing several narrow appendages, usually dark grey in colour on delicate stalks, or more rarely the appendages stiffly stalked together or more or less joined together; the lip is of elaborate construction, narrow and almost straight, fleshy, red and green, in part at least covered with small round glistening vesicles which secrete small drops of nectar—the appendages to the petals are in most cases very mobile, moving with the slightest air movement. Presumably they help to attract pollinating insects. Probably no other orchids have such an elaborate petal form." This description is taken from R. E. Holttum's "Orchids of Malaya."

One could go on indefinitely describing the more interesting and beautiful species of *Bulbophyllums* and their intensely interesting devices for attracting insects and then controlling the insects' behaviour in such a way as to ensure pollination of the next flower visited. However, I think enough has been said to indicate the wealth of material available in this genus for study.

I would feel these notes well worth writing if they should stimulate even a few enthusi-

Continued on page 136

My Experiences in Growing Cymbidium Orchids

Capt. K. A. ANDERSON

• When I first started growing orchids I was a complete "Novice" and when I say novice I mean just that, because my profession had to do with the sea and the sailing of ships thereon; hence, no knowledge whatsoever had been gathered of either the growing of orchids or, in fact, any other flowering plant.

However, once having started to grow orchids it was no time at all before the bite of the "Orchid Bug" developed in me an enthusiasm for this most absorbing hobby, which has remained with me and has increased over the years, enriching life and giving it purpose in my retirement. It has brought with it not only the pleasures and satisfaction of the culture itself but in addition a wealth of friendship with people of similar interests.

I don't know, of course, how you came to start growing orchids or what your aims were at the time. I know that when I caught the ailment my first thought was to become an efficient grower, so with this in mind I sought *advice* from orchid growing friends and acquaintances; resulting from these advices an orchid house was constructed with Ti-tree for shading on the roof and the four sides. As time went on these conditions seemed quite good for actually growing Cymbidium orchids but not satisfactory for flower production because the shading was too heavy to permit the quantity of light necessary for maximum flowering to filter through.

Having heard about, and being encouraged to use, a type of fly screen wire specially made for use in the manufacture of "Masonite" (the wire is tinned but not galvanised), I purchased the necessary quantity and, after removing all of the Ti-tree shading, covered the roof of the orchid house with this wire. For a while it seemed to be a satisfactory shading medium but, alas, before long it commenced to rust and I soon found that the accumulation of rust thickened the wire and reduced the level of light in the orchid house to that which had obtained when Ti-tree shading was used, or even less. It did not take long for this rust flake off and fall amongst the leaves of the orchid plant and, in due course, the bulbs, leaves and flower spikes turned black and the flower spikes were ruined. It would be difficult for anybody to

visualise the devastation it caused, particularly to the flower spikes and the buds. I took samples of leaves, spikes and buds to the Horticulture Section of the Agriculture Department for analysis and advice which, when received, indicated that the acid used in tinning the wire was the cause of the trouble. The end result of this experience was the destruction of about 200 orchid plants and many more flower spikes.

Following this sad experience I sought, and believe I have found, the right road to successful Cymbidium orchid culture. All of the screen has now been removed from the orchid house and replaced with glass; the roof has been glassed over except for spaces left for ventilation and the southern and western sides completely glassed in; the northern and eastern sides have been glassed from the roof down to bench level only. This has been done to allow for air circulation as Cymbidiums require an abundance of fresh air and as much light and water as you can give them in order to gain the ultimate in flower production.

Glass gives protection to the plants and spikes from frost, heavy rain, hail and dust or soot fall-out; it also enables light intensity to be controlled. During the months of May, June, July and August the glass can be kept almost clear; shading is necessary for the remaining months of the year in varying intensity. I intend using white "Resirex", which is a synthetic resin paint. Light, medium or heavy coats can be applied as required to suit either the period of the year or to regulate the light intensity in certain positions in the orchid house for the purpose of flowering orchids of particular colours.

Since erecting the glass and following the "as much water and light as you can give them" plan, I am agreeably surprised at the increase in the number of flower spikes. I must confess, however, to some degree of apprehension as to whether the size and quality of the flower will be adversely affected by the extra load on the plant. At first I considered reducing the number of spikes, but on a second thought decided to try and compensate by using additional fertiliser, which I believe will work, and hope to demonstrate the success of this plan to my orchid loving friends by producing, before the

end of the season, an abundance of high quality flowers. An essential feature of my fertilising plan is not to be afraid to freely use an abundance of really good fresh fowl manure as well as chemical fertilisers on each plant.

The destruction of so many of my plants brought up the question of restocking. Have you thought of a long-range plant to strengthen your orchid collection and would that plan remain constant if overnight you lost half or even three-quarters of your orchid plants? I think that following a quick reduction in the number of plants one is more inclined to face up to the fact that most of us grow far too many orchid plants which have inferior quality flowers. It seems reasonable to carry a plant to which attaches a sentiment, it also is reasonable to grow a few of lesser quality for the purpose of exhibiting; but I now realise that in the past I have grown *Cymbidium* orchids of a quality not suitable for export and I feel no doubt this also applies to most readers. As it is just as easy to grow a plant which produces a high quality flower, a plan to increase the percentage of plants to produce this result might be well worth considering.

With regard to "spotting" on blooms I have come to the conclusion that Red Spider is the main cause. In previous years all my efforts to control or rid myself of this pest proved unsuccessful until this year when, with the use of "Systox", I flowered a *Cymbidium* in mid-April with every bloom perfect and free from spotting. Unfortunately, "Systox" will soon be no longer available so something else has to be found. I have tried "Malathion" without apparent success and now intend to try E.605 "Folidol" or "Trithion". Another cause of spotting is night dew, but this can be overcome by the use of glass; if you use glass, however, do not commence reducing light intensity until the right time to suit particular plants, this right time must be determined according to the colour of the flowers; some pinks and yellows require plenty of light until the buds open, greens, as you know, require some shading as soon as the buds are out of the sheath, etc. However, this right time is a matter which must eventually be decided by each grower based on experiences with their own plants and culture methods.

I hope to be in a position to show the results of my growing methods by exhibiting some plants this year and I also hope that every reader has the thought in mind to do likewise.

With hearty good wishes, therefore, and the hope that the hobby will bring to you the pleasures and satisfaction it has brought to me.

—12 Elvina St., Dover Heights, N.S.W.

Continued from page 137

It will be noted that the male pollen and the female stigma do not mature simultaneously on the same spadix. Hence operate on a few flowers at the one time to chance the correct time element.

A faster method though limited in number is to cut off the top of the mainstem with some of the roots. The lower stump will produce new growths, sometimes several, which rapidly replace the top which has been removed to produce a new plant.

The Anthuriums are happiest in a well shaded position. Fairly high humidity at all times. Compost *must be open* and have sufficient fibrous material in its composition to ensure its maintenance until the plant becomes root bound, calling for renewal. Encouragement to growth by means of a liquid fertilizer is advisable, since the need for a compost which does not break down to become soggy. The Americans provide a special "Anthurium fertiliser" which is believed to contain somewhat more nitrogen than ordinary fertilizers recommended for orchids.

—28 Ruby St., Mosman, N.S.W.

Continued from page 134

asts to grow and enjoy a few of the more attractive or interesting species. The plants are mostly easy to grow and have a wide range of tolerance to temperature. Their main requirements are high humidity and frequent wetting. They must be grown in a perfectly drained medium and do not require much of it, thin tree fern slabs are probably the best all-round medium.

Anyone desiring further information on Bulbophyllums would do well to study the following literature:

"Orchids of Malaya", R. E. Holttum, printed by Government Printer, Singapore, for the Botanic Gardens, Singapore.

The Works of J. J. Smith and R. Schlechter on the orchids of New Guinea.

"Die Orchidaceen von deutsch New Guinea", Dr. R. Schlechter.

"The results of the Dutch Expedition to New Guinea, 1907", J. J. Smith.

—Arawa Plantation, Bougainville.

Anthurium, The Unmatchable

W. ENGLART

• The grower of the exotic orchids can add pleasure and satisfaction aplenty by adding to his collection a few Anthuriums, space permitting. "Exotica" lists no less than 101 species and varieties.

This interesting genus of plants falls naturally into two divisions. The first expends its beauty in richly coloured, long lasting flowers. The second charms us with its magnificent foliage, vying with the Alocasias for pride of place.

With few exceptions these plants require a heated house during the winter months. Provided other cultural requirements are reasonably met, night temperature may drop to 50°F. However, 60°F. is more to their liking.

Anthurium Scherzerianum is most suitable where space is a prime consideration. If fed adequately, it can be grown for a long time in pots up to 6in. Magnificent specimens may call for 8in. Leaves or stems rarely exceed 10in.-12in. and do not spread aggressively. The choice varieties carry their floral spathes in brilliant colours from dark blood red to orange, pink, salmon and white, also red spotted on white ground. The flower should have natural gloss and sheen.

In common with other horticultural masterpieces, the best and choicest varieties are rare and not easy to come by. The spathe should be broad, *slightly* cup shape and carried on firm stems. Important work in hybridising has been done in France in recent years. There is a small variety which is rather hardy. It may be grown cool in sheltered verandah or similar location indoors provided there is ample light without direct strong sun. A well established plant may produce 12 to 18 flowers commencing about August and carrying on for 5-6 months with an odd flower in between. As each flower lasts many weeks there is a good reward for the trouble you may go to.

The more glamorous flowers are found in *A. Andreanum*. The plant, having a larger habit, requires considerably more space. Its larger leaves and longer stems call for more accommodation. In compensation it provides a continuous offering of exquisite flowers of large size up to 8in. in diameter, of choice varieties (and good culture!). They are free flowering and long lasting. A large plant growing under happy conditions, many carry 6-8 flowers prac-

tically all year round. When cut the flowers will last 6-8 weeks in water. *A. Andreanum* should be nearly round and have its spadix near the centre of the spathe. A variety, deep blood red of perfect form, thick substance and highly polished gloss is my favourite in this group. It should have the gloss and lustre of a craftsman's polish.

However, my very first choice in Anthuriums goes to *A. Andreanum bicolor*. A grower has recently refused £100 for a plant of unbelievable beauty. The flowers are red and green with a beautiful sheen, measure about 12in. to 14in. in length and 10in. in width. The flowers last about 10 months on the plant. This plant displays 5-6 flowers continuously. A heated glasshouse maintaining 60° is a *must*, at least this side of Brisbane.

The above refers to the best selected plants which are rare. Seedlings, unflowered or otherwise, are freely available at reasonable prices. With care in selection, culture and luck the growing of them is a rewarding hobby.

A. Crystallinum, is one of the showiest foliage plants to be seen. Dark green heart shaped foliage with silver veins strongly marked, when well grown it is a sight not quickly forgotten. Perhaps the stateliest of all is *A. Veitchii*. Its leaves are hanging vertically 2ft. 6in. to 3ft. long and 6in.-8in. wide. From the main centre rib horizontal ribs or pleats continue the entire length of the leaf with a complex finish at the top of the leaf where it is attached to the strong, erect stem. To see 6-8 leaves on a strong plant is an arresting experience.

A. Warocqueanum. A remarkable velvet emerald green leaf with silvery veins reaching a length of 3ft.-3ft. 6in. long and 9in.-10in. wide. It extends upwards rather faster than its cousins. Probably because it sheds its leaves more often. Hence it rarely has more than 3-4 leaves at any one time.

As indicated above there is a large number of showy varieties, all very desirable decorations. I may mention *A. Magnificum*, *A. Grande*, *A. Dendatum*, *A. Hoffmanii*.

Propagation may be done by seed. However, artificial pollination becomes necessary. By lightly moving the finger up and down over a few spadices the pollen will be distributed. A better method is the use of a camel hair brush.

Continued on page 136

● **WINTER SHOW OF ORCHID SOCIETY OF N.S.W.** (Fred Jones):—The Third Annual Winter Show arranged by the O.S. of N.S.W. was held at the Y.W.C.A., Liverpool St., Sydney, on 27th June.

Despite the cold and wet weather prevailing and the consequent check to the opening flowers, a very creditable number of plants were exhibited.

The *Cypripedium* Championship of N.S.W. was won by Mrs. S. Hayter, who presented a very fine flower in Langley Pride 'Laelio Sasso'. The Reserve Champion Balaclava 'Beret' A.M. was also exhibited by Mrs. Hayter, who is one of our keenest slipper growers.

Another enthusiastic grower, Mrs. K. E. Thompson, won eight first prizes, and consequently was a very easy winner of the H. R. Crutch Trophy presented for the most successful exhibitor.

An innovation this year was the greatly appreciated display of thirty cut spikes of vandaceous varieties sent specially for the Show by one of our overseas members, Mr. J. Leow, Nam Kee Nursery of Singapore. These flowers ranged from the pure white Vanda Diana to the strawberry red of Nellie Morley, with an apricot Tan Chay Yan, the unusual Arachnis Maggie Oei, Aranda Wendy Scott, violet mauve and Renanthera Violet.

Grand Champion Cypripedium: Langley Pride 'Laelia Sasso', Mrs. S. Hayter. Large frilled flower. The dorsal white overlaid with a greenish suffusion and red brown spots, the petals and pouch yellow and brown, the ventral green. An excellent flower which won the Shepherd and Newman Trophy.

Reserve Champion Cypripedium: Balaclava 'Beret', Mrs. S. Hayter. The dorsal white overlaid with green and red brown spotting, the petals and pouch reddish brown, the ventral green. Granted an Award of Merit.

Best Green or Yellow Cypripedium: Grace Darling, Mr. R. Trennery. A large plant with two bold showy flowers. The dorsal deep green with a white edge, the petals and pouch yellow green, ventral green.

Best Red or Pink Cypripedium: Koritzza, Mrs. K. Thompson. A single colourful flower. The dorsal bright reddish purple with white edging, petals and pouch reddish brown, ventral green.

Best Specimen Cypripedium: Insigne, Mrs. K. Thompson. A grand display with twenty-one flowers.

Best Maudiae Type: Goultenianum Album, Mrs. K. Thompson. With the usual Maudiae colouring.

Best Other Colour: Lohengrin, Mr. A. R. Persson. Two medium sized distinct flowers. The dorsal white with a yellow green basal area, petals, pouch and ventral white with fine brown markings.

Best Group of Cypripediums: Mr. R. Trennery. This group consisted of Oakfield, a bold spotted variety, Mildred Hunter, H.C., reddish, Angel Luscombe 'Rivermont' (H.C., Victoria), a lovely reddish variety, Momag 'Laelia Sasso', a brushed rose dorsal, Emberton 'Dawn', white dorsal with a green base and reddish brown spots, Winslow 'Verlie', H.C., a huge spotted flower, Ambersham 'Christine', A.M., a neat flower, Mildred Hunter 'Compactum', Palmerston, H.C., a spotted reddish variety, Tearlath 'Margaret Anne', Bonita and Grace Darling.

Display of Orchids and Foliage Plants: Mr. L. Giles. A fine display which included the following Cymbidiums: Sirius, three plants each with two arching spikes of green flowers, Rutana, pink with a reddish lip, Ramboda 'Merrilong', green with a bold red lip, Woodstock, pastel pink with a red spotted lip, and several Remus crosses showing rich reddish colouring. Also Dendrobium Pompadour with five sprays of bright red flowers, Oncidium Splendidum, yellow and brown, also numerous spikes of the pink Calanthe Vestita. A nice group of Cattleyas included B.L.C. Shere, with large pink flowers and a bold lip, L.C. Gaillard, four pink flowers, and B.C. Deese x Rosemary, three showy pastel pink flowers. Cypripediums were Anita, a dainty green, a large Owlswick, the white Chastity, also Koritzza and Floriales x Kay Kay in the red tonings. Exhibit was embellished with colourful Crotons and foliage plants. Granted a Silver Medal by the Society's Judges.

Display of Orchids and Foliage Plants (area 6ft. x 3ft. 6in.): Mrs. K. Thompson. A nicely arranged group of the following Cypripediums, Cameo 'Girrahween', a large spotted dorsal, Mildred Hunter, spotted, Huntava, the dainty greenish Anita, Ayot-St-Peter 'Girrahween', also the quaint Goultenianum Album. An excellent Odontionia Tordonia with large rounded white flowers with red brown blotches contrasted with the bright yellow and brown of Oncidium Palmyre, whilst a salmon coloured Vanda Lester McCoy x Clara Shipman Fisher added to the variety. Very early spikes of Louis Sander 'Girrahween'

and Ispahan 'Mascot' were placed in the display. Awarded a Bronze Medal.

Display of Orchids and Foliage plants (Minimum of 15 Orchids): Messrs. R. Deane and F. Jones. A small display arranged with excellent and colourful foliage plants as a background. The Cypripediums included Warrior 'Green's', a bold green spotted flower, two plants of Charlesworthii with a rounded pink dorsal, Corsair 'Holford's', Crusader, reddish, Lady Emily, a neat Perseus and the unusual Margaret Brands, a specimen plant of the distinct Dendrobium Lawesii with numerous red flowers contrasted with the white Dendrobium Johnsonii. Brassocattleya 'Bruges' with three large mauve flowers made a colourful display; also Oncidium Splendidum. The greenish and unusual shaped Cynoches Chlorochilon and Calanthe Veitchii added variety.

One Cymbidium: Ispahan 'Mascot', Mrs. K. Thompson. An out of season spike of 15 flowers. Petals and sepals pastel green.

Best Export Cymbidium: Louis Sander 'Girrahween', Mrs. K. Thompson. An early spike with fourteen large pink attractive flowers.

Two Best Cymbidiums: Ispahan 'Mascot' and Louis Sander 'Girrahween', Mrs. K. Thompson.

Best Decorative Cymbidium: Sirius, Mr. L. Giles. A strong plant with two arching spikes. Petals and sepals clear pastel green, the creamy lip overlaid with red brown spots.

Best Cattleya: Laeliocattleya Nelson, Mr. A. J. Bell. A single large shapely flower. A clear pink shade, the lip darker with yellow markings in the throat.

Best Dendrobium: Lady Hamilton, Mr. B. Bonnyman. An arching spike of ten flowers. An intense reddish purple shade.

Best Phalaenopsis: Margaret Bean, Mr. H. R. Crutch. A raceme of large showy flowers. Flower white, the lip having yellow and red markings. Fair shape.

Best Vanda: Rothschildiana, Mr. B. Bonnyman. An excellently grown plant with a spike of twelve large rounded flowers. Petals and sepals a mauve shade overlaid with a darker mauve tessellation, the lip violet.

Best Native Orchid: Dendrobium Rigidum, Mr. R. Leaney. A small growing and rarely seen plant with ten tiny flowers. Petals and sepals an off-white shade, the lip white with brownish markings at the base.

Best Other Variety: Odontionia Tordonia, Mrs. K. Thompson. Ten large flowers and buds. Petals and sepals white with red brown blotches and markings, the lip similar.

The following groups contributed to the success of the Show: A magnificent display of approximately one hundred Cypripediums was exhibited by Mr. R. Trennery. Arranged with spikes of Cymbidium Magog, Vaihalla, Edith and Guelda as a background, and a lovely specimen plant of Laelia anceps. The Judging Panel granted the display a Gold Medal for the quality and quantity of the Cypripediums.

Mr. A. R. Persson exhibited various Cymbidium and Brassocattleya seedlings, a mauve Vanda Flammerole, and brightly coloured S.L.C. Anzac 'Orchidhurst', the quaint Cypripedium Fairieanum and a large Cattleya Bob Betts.

Mr. F. Slattery, as usual, exhibited early Cymbidiums. General Montgomery, yellow, Luminous 'Merrilong', a dark reddish brown, also various varieties of Magog and Guelda. Several nice Cypripediums included Tearlath, 'Distinction' and 'Belvedere', also Langte, a yellow green.

Mr. H. R. Crutch exhibited Cymbidiums Windsor Castle 'Sailor Bay', also plants of Magog 'Jenny', Magog 'Prince' and Tintagel 'Greenacres' varied by Cypripediums insigne, Mildred Hunter and Tearlath, also Calanthe Veitchii and the attractive Oncidium Varicosum.

Mr. C. M. Taylor also displayed early Cymbidiums, various Laelias and other interesting species were embellished with unusual bromeliads and foliage plants.

CYMBIDIUMS IN QUEENSLAND

The 1960 Cymbidium season promised to be the best ever in Queensland. Many growers report a much larger number of spikes on the way and more than one grower who has had no success at all previously speaks with pleasure of the flowers he hopes to have at the September Show.

Whether the present season is the reason—it has been a relatively dry year with no wet season to speak of—or whether it is improved techniques, it is too early to say. We will have to wait for another year to tell us the answer. But we all hope that growers have found the technique to suit the climate.—P. K. Searle.

• **VICTORIAN ORCHID CLUB WINTER SHOW:**—Winter Show, 1960, was the best attended of these shows for some years. There were no more exhibits than usual, but the variety was greater. Cattleyas were not so numerous, but there were more Cymbidiums; Cypripediums, around which the show was originally built, were fewer but better in quality. It is to be regretted that most exhibitors and would-be exhibitors have become quality-conscious, because when everyone brought along what they had in flower, regardless of its chances in competition, our shows were more colourful.

The outstanding exhibitor was again Mr. G. Enever, who put in the only group of 10 plants from which came the first, second and third prize winners in Cypripediums.

Langley Pride was flowered better than most of us have ever seen it, with a dorsal over four inches wide. This almost white and gold Cypripedium has faults if we care to look for them, but its almost pure white dorsal is lightly spotted with deep red-purple basally on a green shaded area where other flowers are sometimes spoilt by over-emphasis of markings. The ventral is almost as large as the dorsal and the sole fault in an almost perfect flower could be found in the petals if we chose to be so demanding. Second prize winner, Conigar, is in what we regard as the classical Cypripedium line of smooth rounded form against the baroque goffering of dorsal, ventral and petals of Langley Pride. Conigar is in the darker red shades on a brown and green ground, with over-emphasis in colour and marking. John Henry 'Stonehurst' was not within reaching distance of the first two in winning third place, and some of the judges would rather have awarded the placing to another plant from Mr. Enever's group that was rejected more for its coarseness than any other reason. But all the plants in the group were well grown.

In reds, Mr. Kirkbright's Wendbourne was characteristic of this red strain, but on a rather weak plant. Green was poorly represented this year and Mr. McCraith's Grace Darling x Desire, though weaker than in years past, had no trouble in winning.

"Any other colour" is a class that can cause endless argument, but this year was resolved very easily for us by Mr. Wright, Jnr. His Memoria R. Vicks was a little unfortunate in not having another week's maturity. Looking at it another way, the judges would have had

a problem on their hands had it been mature. Predominantly red on a brown ground, in its immature state it exhibits balance that is hard to beat.

In Cymbidiums the classes were well filled by plants we have seen over the years, the best of which were Rosette and Grand Monarch Exquisite. The best coloured exhibit was the Sydney cross Oscar Persson, deep red and quite a fair shape.

The section for three orchids always produces a number of fine genera and was a means of benching plants at these winter shows that could not otherwise have been brought in because no sections could be allotted for them. But Laelias, which once were well represented, this year dwindled to two plants, neither of which compared with what we have seen in previous shows.

In the miscellaneous section in the novice group were two plants that commanded attention, both Dendrobiums, that we see more often later in the year. Mr. Pamment flowered both in warmer than usual conditions given these plants. They were well flowered and well grown.

Vandas have not yet captured the attention of growers in Melbourne, chiefly because they need a little more warmth than most of us can give them. Of those exhibited, Mr. Kirkbright's Jennie Hashimoto was small but extremely attractive. Unfortunately, these plants do not propagate well, so there is little chance of ever getting pieces of them as we can of other genera, and it is this fact as much as anything that holds them back in popularity.

Results of the show were as follow:

- Champion Cypripedium:* 1. Langley Pride, G. Enever; 2. Conigar, G. Enever; 3. John Henry var. Stonehurst, G. Enever.
Collection of Cymbidiums: (Min 10 plants): 1. G. Enever.
Group of 3 Cypripediums: 1. J. Rentoul; 2. W. Wright, Jr.
Cypripedium—Red Shade: 1. Windbourne var. Queen Elizabeth, A. Kirkbright; 2. Freda Leete var. Picardy; J. Rentoul
Yellow or Green Shade: 1. Grace Darling x Desire, G. McCraith; 2. Ansun, C. Davis.
Any other shade: 1. Mem. R. Dick Bonitax Margaret Brandes, W. Wright Jr.; 2. Wisburn, C. Davis.
Exhibited here first time: 1. Dervish "Joanne", J. Garton.
Callosum Type: 1. Alma Gaevaert, "Maurice Merton"; J. Allen.
Specimen species: 1. insignie; J. Garton.
Specimen Hybrid: 1. Heather Leeannum, R. Durham; 2. Amazon x Missouri, V. Smith.
Grower Less than 30: 1. Emerald Star, N. O'Sullivan; 2. Legburnese, J. Garton.
Cymbidium, pink shade: 1. Magog, R. Hodgins; 2. Doris var. Tomlinson, F. Vorsey.
Cymbidium, Red Shade: 1. Liliana Merrilong, H. Nelson; 2. Clarissa, R. Martin.
Cymbidium, Yellow Shade: 1. Stella Brocklebank, F. Aldous.
Cymbidium, Green Shade: 1. Grand Monarch var. Exquisite, L. Branagan; 2. Rosette, R. Hodgins.
Cymbidium, White Shade: 1. Cadland, V. Smith.
Cymbidium, exhibited here first time: 1. Cym. Oscar Persson, L. Branagan.

Cattleya: 1. L. C. Hertha "Wondabah", J. Allan; 2. S. L. C. Rainbow x Isabella, J. Allan.

Laelia: 1. *Laelia anceps*, J. Garton; 2. *Laelia anceps*, F. Vorsev.

Odontoglossum and all Gen.: 1. Sallam, A. Kirkbright; 2. Alisdum, A. Kirkbright.

Miscellaneous: 1. *Oncidium Splendidum*, A. Kirkbright; 2. *Zygopetalum*, J. Morley.

Group any 3 Orchids: 1. V. Smith; 2. H. Schultze.

Australian Native: 1. *Dendrobium aemulum*, Capt. and Mrs. Cole; 2. *Pterostylis nutans*, N. Brown.

Vandaceous Type: 1. Vanda Jennie Hashimoto, A. Kirkbright; 2. Vanda Laukapu, H. Schultze.

Novice, Cypripedium: 1. Cyp. Kay-Kay, H. Fagg; 2. Framewood, H. Fagg.

Novice, Cymbidium: 1. Cym. Eva, Mrs. E. Burke; 2. Cym. Kathleen, Mrs. E. Burke.

Novice, Cattleya: 1. Catt. trianae, S. Shepherd.

Novice, Miscellaneous: 1. Den. pierardii, W. Pamment; 2. Den. Merlin, W. Pamment.

Novice, Laelia: 1. *Laelia anceps*, Mrs. V. Prosser.

• ORCHID SOCIETY OF WESTERN AUSTRALIA INC.:—WINTER EXHIBITION, PERTH TOWN HALL, JUNE 30th and JULY 1st, 1960.

A beautiful display of orchids and pot plants was staged on this occasion. The central figure—a two-tiered fountain—was surrounded by a large assortment of choice pot plants, including colourful Crotons, Dracaena, Anthuriums and variegated leaved plants, fringed with fine Adiantum and many other ferns. The orchid exhibits were tabled around this display. Being winter, the principal exhibits were *Cypripedium*, but a number of colourful *Cattleyas*, *Dendrobes*, *Vandas*, with a few *Cymbids* and other general created variety. There were several entries for the combined display of orchids and pot plants, each occupying a space of 6ft. by 3ft. The whole space of the Town Hall presented a really lovely scene, supporting the draped, lighted and framed Champion Exhibit by the President, Mr. G. Marshall, who was heartily congratulated by members and friends. Additional electric lighting features organised by one of our enthusiastic members—Mr. H. Smith—completed the picture. This was the scene when the Deputy Premier, the Hon. Arthur Watts, C.M.G. (in the unavoidable absence of our Patron, the Hon. Sir Ross McLarty, K.B.E., M.M.), officially opened the Exhibition at 8 p.m. He congratulated the Society on its rapid progress and pointed out that trees and flowers—particularly orchids—created a beauty which had appealed to people—so much so that in the early days of orchid culture large sums of money had been spent in sending expeditions to the depths of unknown jungles, where lives had been lost in pursuit of rare species. Mrs. Watts was presented with a shoulder spray of white *Cattleyas*, artistically made up at short notice by Miss Wendy Quayle.

The newly created Panel of Judges went into operation with much enthusiasm and for the first time the Society's exhibits were televised during the judging. Many fine exhibits of good quality in some sections made judging quite a lengthy process.

The first prize winners included:—

CYPRIPEDIUM—Champion: Dombey, G. Marshall
Reserve Champion: Momag 'Whatcroft Hall', A. C. Dawson.
Best *Cypripedium* other than above in Members' Section: Meigle, H. Mercer.

Best *Cypripedium* other than above in Novice Section: Atlantis, W. E. Edward.

OPEN SECTION.

Yellow or Green Dorsal: Barham, G. B. Cantwell.

Red or Purple Dorsal: Mecca Little Gem x Tearleth, S. P. Hall.

Any other colour dorsal: White Emblem, G. B. Cantwell.

Specimen Plant: Mocha, H. Mercer.

MEMBERS' SECTION—

Yellow or Green Dorsal: Barham, G. B. Cantwell.

Red or Purple Dorsal: Momag, A. C. Dawson.

Any other colour dorsal: Meigle, H. Mercer.

Specimen Plant: Edith Lucas x Harefield Hall, H. Mercer.
Species: insigne 'Harefield Hall', H. Lodge.

CATLEYA—

White or Yellow: Highburyensis, R. B. Brown.

Any other colour: Warnham Beauty, W. How.

DENDROBIUM—

Hybrid: L. Allen.

CYMBIDIUM: Dr. Griffiths.

CYPRIPEDIUM—Novice Section—

Red or Purple Dorsal: Atlantis, W. E. Edward.

Any other colour dorsal: Leeaunum, Mrs. Wilkins.

Specimen Plant: Mrs. R. Cogan.

DENDROBIUM: Mr. R. P. Lukides.

CYMBIDIUM: Hanburyeanum, Mrs. Wilkins.

Species not elsewhere on Schedule: H. M. Smith.

DISPLAY OF ORCHIDS & POT PLANTS—

1. Mr. K. Birk; 2. Mrs. O. Mackay; 3. Mrs. D. Paton.

These displays created much public interest and greatly assisted in the overall effect. The second and third prizes being won by two of our keenest lady members, who were heartily congratulated on their success.

Cold clear weather favoured the Show, which was strongly supported by the general public, and considered by the large attendance of members to be one of the best shows ever put on by the Society.

S. P. HALL,

Publicity Officer.

• MANNING RIVER ORCHID SCTY.—Membership is steadily growing and has reached the vicinity of 80. Meetings are well attended.

Preparations are well in hand for the Annual Show which will be held on September 30th and October 1st in the Methodist Hall, Taree, with Mr. Harry Bond as Judge. Great interest is being taken in the talks given by members each month, two being selected at each meeting.

With the point score half gone, there is some very keen competition in all three sections; only half a point separating some competitors.

NEW ORCHID HYBRIDS

Reprinted from English Journal "The Orchid Review"

March, 1960

Name	Parentage	Flowered by
ARANDA		
" Saw Kim San	Hilda Galistan x <i>V. sumatrana</i>	Low Meng Guan (S'pore Bot. Gdns.)
BRASSOLÆIOCATTLEYA		
" Bounty	Tucuman x <i>Lc. Mem. Albert Heincke</i>	B. O. Bracey & Co.
" Ewart McDonald	Norman Bay x <i>Lc. Vallandina</i>	H. E. T. McDonald (Mansell & Hatcher)
" Harlequin	<i>Lc. Mem. Albert Heincke</i> x Nugget	B. O. Bracey & Co.
" Pinkie	<i>C. Bow Bells</i> x Nanette	"
" Sadko	<i>Lc. Muchacha</i> x Green-heart	"
" Sitka	<i>L. dormaniana</i> x Green-heart	"
" Taos	<i>Lc. Golden Ray</i> x Nugget	"
CATTLEYA		
" Aino	Peetersii x Tethys	"
" Cedralion	Arctic Circle x Bow Bells	"
" Cerycon	Mrs. Stewart Poole x Fabia	"
" Cherryripe	Snowsprite x <i>guttata</i>	"
" Cosidius	Dinah x Dupreana	"
" Creve Cœur	Empress Bells x Candida	Gray Summit Orchids
" Datan	Corflambo x Claribelle	B. O. Bracey & Co.
" Edythe Wood	Bob Betts x Eloquence	Bernie Wood (O. W. MacQuiddy)
" Fuang Leeaporn	Stephen Sander x Gloriette	Montgomery
" Gigi	Mount Shasta x Henrietta Japhet	Arthur Freed Orchids
" Harpina	Ethel Bishop x Eloquence	B. O. Bracey & Co.
" Laomedon	Dorene x Bow Bells	"
" Leto	Annie J. Lines x Tethys	"
" Mary Ann Barnett	Arctic Circle x Bob Betts	"
" Pernel George Barnett	Ethel Bishop x Bob Betts	"
" Pirene	<i>mosiae</i> x Bab Betts	"
" Princess Aileen	White Sail x Pearl Harbour	O. H. Schwab (Armcast & Royston)
" Rimoc	Ville de Liege x Maggie Raphael	B. O. Bracey & Co.
" Salmacis	Ethel Bishop x Joyce Hannington	"
" Semele	Tethys x Dupreana	"
CYMBIDIUM		
" Albany	Paul Revere x Alexanderi	Dorset Orchids
" Aleppo	Alexanderi x Irish Pearl	"
" Algiers	Alexanderi x Regents Park	"
" Bahia	Babylon x Barbara Smith	"
" Balshina	Shina Black x Balkis	R. P. Calmette & L. E. Drumm
" Clare Lady Clifford	Stourbridge x Constance Flory	Burnham Nurseries
" Embassy	Emerald Queen x Eider	Dorset Orchids
" Emir	Emerald Queen x Miretta	"
" Fernham	Rosalli x Louis Sander	"
" Louis Phillippe	Eve x Louis Sander	"
" Patricia Anne	<i>aloifolium</i> x Dryad	Norris H. Powell
" Rio Grande	Rio Rita x Barbara Smith	Dorset Orchids
" Swanage	Clarissa x Cygnus	"
CYPRIPEDIUM		
" Agnes Moore	Chardmoore x Agnes de Burc	E. C. Wilcox
" Avine	Grace Darling x Margaret MacCaull	Dr. C. H. Basson (E. C. Wilcox)
" Doris Cowburn	Doris Hunter x Chardmoore	E. C. Wilcox
" Florence Walters	Diana Broughton x Ruskington	Gordon M. Hoyt
" Hillmoore	Clementine H. Churchill x Chardmoore	E. C. Wilcox
" Jackson Holloway	Diana Broughton x Deley	Gordon M. Hoyt
" Jacob Elshin	Elizabeth Keeley x Ingenueuse	"
" Palette	Porthos x Harrow	Charlesworth & Co.
" Peter Black	Littledean x Hellas	Gordon M. Hoyt
" Stuart Wilcox	Blagrose x Evanhurst	E. C. Wilcox
" Twilight	Printea x Wendover	Charlesworth & Co.
" *W. N. Evans III	Kay-Kay x W. N. Evans	"
DENDROBIUM		
" Janice Hale	Rose Marie x <i>phalaenopsis</i>	T. J. R. Hale
" Tan Hui Keow	Sander's Crimson x Lady Hamilton	Tan Chee Seng (Khak-Chiew Gaw)
LÆIOCATTLEYA		
" Alope	Princess Margaret x Joseph Hampton	B. O. Bracey & Co.
" Aesir	Mem. Albert Heincke x Mem. J. K. Butler	"
" Blue Boy	<i>C. Ariel</i> x Elegans	"
" Bodithys	Boadicea x <i>C. Tethys</i>	Murray Spencer (Joe Ozzella)
" Chicago	Ernie Pyle x <i>C. Bing Crosby</i>	Joseph W. Smith (Earl J. Small)
" Brazoria	Sagana x <i>C. Enid</i>	A. J. Proebstle
" Cadmus	<i>C. Texas Ranger</i> x H. G. Alexander	B. O. Bracey & Co.
" Caria	Atlantis x <i>C. Tityus</i>	"
" Celmis	May x <i>C. Tityus</i>	"
" Cleothera	<i>C. Altadena</i> x Priam	"
" Corinth	Natchi x <i>C. Fabia</i>	"
" Coya	<i>C. Prospector</i> x Rosamund	"
" Cratina	Sunbelle x <i>C. Enid</i>	"
" Cretheus	<i>L. purpurata</i> x <i>C. El Toro</i>	"
" Cydon	Edith Dorpe x <i>C. Oruba</i>	"

March, 1960—continued

Name	Parentage	Flowered by
LÆLIOCATTELEYA—continued		
" Epona	Gitche Manito x May	B. O. Bracey & Co.
" Euryte	Detta x C. Mount Royal	"
" Ilithia	Magadha x <i>C. labiata</i>	"
" Intip Chinan	Natchi x C. Annie J. Lines	"
" Kirnis	Morvyth x C. Dupreana	"
" Krukis	Susan x C. Tethys	"
" Lerna	Magadha x C. Serenity	"
" Lucan	May x Princess Margaret	"
" M.C.C.	Desna x C. Alberto Toselli	A. J. Magin (Sanders)
" Mestra	Lucida x Canberra	B. O. Bracey & Co.
" Naxos	<i>C. Dupreana</i> x Eva Robinson	"
" Paracas	<i>C. hardyana</i> x <i>L. xanthina</i>	"
" Rhea	Mygdon x Mem. Albert Heincke	"
" Sapa-Inca	Muchacha x Lee Langford	"
" Sidero	Helen Armacost x Dorothy Fried	"
" Tacitus	Elissa x Gitche Manito	"
" Taranis	Shimard x Windemere	"
" Thoosa	<i>C. Dubiosa</i> x Anubis	"
" Tinya	Topaz x <i>C. harrisonia</i>	"
" Tuisto	Princess Margaret x C. Annie J. Lines	"
" Vallecholet	Bonanza x C. Remy Cholet	Vallemer Gardens
" Yellow Bunting	<i>C. Luegeæ</i> x Canberra	B. O. Bracey & Co.
MILTONIA		
" Dolores Hoyt	Firefly x Woodlands	Gordon M. Hoyt
ODONTIODA		
" Olive May	<i>Cochlioda rosea</i> x <i>Odontioda</i> Argia	D. A. White (Sanders)
ODONTOGLOSSUM		
" Edna Thirza Hankin	Nervara x Robert Strauss	C. D. Hankin (Charlesworth)
PHALÆNOPSIS		
" Gloria	Rothomago x Gloriosa	Karl Kugust
" Ruby Lip	Palm Beach x Star of Rio	Arthur Freed Orchids (Kiesewetter)
POTINARA		
" Mem. Eva Aspin	<i>Slc.</i> Sunburst x <i>Blc.</i> Green-heart	B. O. Bracey & Co.
" Viracocha	<i>Slc.</i> Estella Jewell x <i>Blc.</i> Iliad	"
SOPHROLÆLIOCATTELEYA		
" Nusta	Estella Jewell x <i>Lc.</i> S. J. Bracey	"
" Vallezac	<i>Lc.</i> Golden Gate x Anzac	Vallemer Gardens
VANDA		
" Tan Kok Leong	Roberta Chun x <i>sanderiana</i>	Low Meng Guan

*NOTE: This is the first registration adopting the suggested Automatic Naming Rule for first generation back crosses. (See O.R., Oct., 1958, page 211/212).

April, 1960

Name	Parentage	Flowered by
ARANDA		
" Englan Lim	Arachnis Ishbel x <i>V. cærulea</i>	Dr. Lim Swee Aun (S'pore Bot. Gdns.)
BRASSOCATTELEYA		
" Josefina de Castaneda	Sonia x C. Bow Bells	L. E. Castaneda
BRASSOLÆLIOCATTELEYA		
" Amarrillo	Wren x Malvern	Rod McLellan Co. (E. W. McLellan)
" Countess Hertha	Viscountess x <i>Lc.</i> Hertha	Thornton's Orchids
CATTELEYA		
" Claire Dreier	Florence Patterson x Dorothy Mackaill	Earl J. Small Orch.
" Douglas Johnston	Bow Bells x General Patton	D. W. Johnston
" Lucille Small	Bow Bells x Dorothy Mackaill	Earl J. Small Orch.
" Margret Link	Huron x Kittiwake	Armocost & Royston
" Nancy Elaine	<i>triana</i> x Bembridge	Thornton's Orchids (R. H. Gore)
" Ruth M. Johnston	Bob Betts x General Patton	Douglas W. Johnston
CYMBIDIUM		
" Adventurer	Fleur de Lys x Babylon	Fred A. Stewart
" Aldington	Erica Sander x Nofrue	Thos. Little & Co. (Sanders)
" Armalda	Esmeralda x Clare Armstrong	Fred A. Stewart
" Banda Sea	Pixie x Swallow	"
" Bangalore	Joan of Arc x Claudona	"
" Bee Beament	Cariga x Sussex	Frank J. Ross
" Bircholt	<i>tracyanum</i> x Dawn Lights	Thos. Little & Co. (Sanders)
" Blossom Ross	Esmeralda x Cariga	Frank J. Ross
" Blue Heath	Blue Smoke x Heathrow	Fred A. Stewart
" Carigara	Blue Smoke x Cariga	"
" Carikhan	Carisona x Nam Khan	"
" Charles Wilson	Esmeralda x Balkis	Frank J. Ross
" Cherry Hill	Saigon x Babylon	Fred A. Stewart
" Clarisse Carlton	Cambria x Babylon	"
" Eureka	Esmerella x Balkis	"

April, 1960—continued

Name	Parentage	Flowered by
CYMBIDIUM—continued		
" Fire Khan	Nam Khan x Firebird	Fred A. Stewart
" Gibbs Heath	Irene Gibbs x Heathrow	"
" Grand Azi	Alexanderi x Grand Monarch	Sherman Orch. Gdns.
" Henry Rudolph	Shiraz x Alexanderi	Frank J. Ross
" Joseph Lovas	Gabriel x Pauwelsii	Fred A. Stewart
" Lovell Lawrence	Sussex x Rio Rita	Frank J. Ross
" Lydia Pickell	Rusper x Apollo	Frank J. Ross
" Marge	Lutscens x Balkis	Sherman Orch. Gdns.
" Mecca	Caravan x Alexanderi	"
" Mem. Maxine Williamson	Plover x Babylon	Fred A. Stewart
" Mem. Robert Casamajor	Balkis x Apollo	"
" Nadette	Nadina x Pauwelsii	"
" Nellrada	Nell Gwynne x Esmeralda	"
" New Horizon	Fleur de Lys x Celeste	"
" Nottingham	Robin Hood x Sherwood Forest	Rod McLellan Co. (E. W. McLellan)
" Olympos Grace	Greta x Olympus	Fred A. Stewart
" Pirouette	Pauwelsii x Miretta	Lord Hothfield (McBeans)
" Queen Khan	Queen Mary x Nam Khan	Fred A. Stewart
" Rayme	Alexanderi x Rosalita	R. P. Calmette
" Royal Stewart	Doris Aurea x Balkis	Fred A. Stewart
" Samarinda	Constance Flory x Alexanderi	"
" Shillalah	Claudona x President Wilson	Wilson's Orchids
" Spice Islands	Claudona x Balkis	Fred A. Stewart
" Spring	Adelma x Clare Armstrong	Lord Hothfield (Armstrong & Brown)
" Stacey Stewart	Princess Elizabeth x Babylon	Fred A. Stewart
" Verdiflorum	Venus x <i>Lowio-grandiflorum</i>	Rod McLellan Co. (E. W. McLellan)
" Veronese Painting	Verona x Pauwelsii	Fred A. Stewart
CYPRIPEDIUM		
" Brea	Sunstar x Balbus	Rod McLellan Co. (E. W. McLellan)
" Cazadero	Douce Confidence x Selma	Rod McLellan Co. (E. W. McLellan)
" Golden Dale	Allendale x Gold Mohur	Dr. W. Stirling (A. J. Keeling)
" Hans Neuenhaus	Wakeswood x Scarlet Prince	W. Hennis
" Hornitos	Hathor x Haroun	Rod McLellan Co. (E. W. McLellan)
" Olympic Forest	Menthule x Milmoore	Beall Greenhouse Co.
" Pali	Blue Order x Maudiae	"
" Pitt River	Pittlands x Burleigh Mohur	Rod McLellan Co. (E. W. McLellan)
" Rain Forest	Emmer Green x Elizabeth Keeley	Beall Greenhouse Co.
" Red Rimrock	Rimrock x Cardinal Wing	"
" Rimrock	Odin x Doris Stanton	"
" Thunder Bay	Blagrose x Blue Order	"
DENDROBIUM		
" Heng Mui Keng	<i>leporinum</i> x <i>leanum</i>	Heng Wilgie (S'pore Bot. Gdns.)
" Tan Teo Kim	Ursula x Tan Chye Siam	Tan Teo Kim (Tan Chye Siam)
LÆLIOCATTLEYA		
" Alvim Seidel	<i>L. regnellii</i> x <i>C. harrisoniae</i>	Orquideario Catarinense
" Endurance	Resolute x <i>C. Thetis</i>	H. W. B. Schroder
" Gough	Carrie Goldfarb x Mirabelle	Rod McLellan Co. (E. W. McLellan)
" Judy Small	Excellency x Louella O. Parsons	Earl J. Small Orchids
" Rosy Hue	<i>C. Minnehaha</i> x <i>Aconagua</i>	H. W. B. Schroder
" Tude Cardoso	<i>C. loddigesii</i> x Pontami	Rolf Altenburg
MILTONIA		
" Autari	Solfatari x Augusta	Charlesworth & Co.
" Lynnwood	Mem. H. T. Pitt x Limelight	Gordon M. Hoyt (Black & Flory)
" Sumas	Lynnwood x Woodlands	Gordon M. Hoyt
ODONTOGLOSSUM		
" Elpania	Elise x Crispania	Charlesworth & Co.
" Mount Baker	Goeland x <i>crispum</i>	Beall Greenhouse Co.
" Mount Constitution	Tees x <i>crispum</i>	"
PSILAEOPSIS		
" Cameo Gem	<i>amabilis</i> x Cast Iron Monarch	Dr. Guy R. Stoddard (Kiesewetter)
" Confetti	Dr. George N. Macdonell x Winifred Prahl	Harold D. Wright
" Gualala	Chieftain x Pasadena	Rod McLellan Co.
" Harry Z. Lawrence	Cast Iron Monarch x Thos Tucker	Harold D. Wright
" Iron Liege	Cast Iron Monarch x Winifred Prahl	"
" La Fleur Blanche	Cast Iron Monarch x <i>aphrodite</i>	Dr. Guy R. Stoddard (Kiesewetter)
" La Gorce Blanc	Rio Blanco x Cast Iron Monarch	"
" Lillian Germaske	Cast Iron Monarch x <i>sanderiana</i>	"
" Martha Jane	Doris x White Monarch	Earl J. Small Orchids
" Mary Lou Stoddard	Cast Iron Monarch x Louise Georgianna	Dr. Guy R. Stoddard (Kiesewetter)
" Monarch Beth	Elisabethiae x Cast Iron Monarch	"
" Monarch Gem	Palm Beach x Cast Iron Monarch	"
" Monarch of Venus	Venusta x Cast Iron Monarch	"
" Pink Elephant	Pink Mink x Clara I. Knight	Harold D. Wright
" Pink Fire	San Souer x Helle	"
" Pink Profusion	Pink Mist x Marmouset	"
" Rio Blanco	Star of Rio x Doris	Dr. Guy R. Stoddard
" Rose Cascade	Hermione x Marmouset	Harold D. Wright
" Tenaya	Hollywood x Margaret Bean	Rod McLellan Co.
" White Monarch	Katherine Siegwart x Cast Iron Monarch	Earl J. Small Orchids
" Winter Sunset	La Canada x Cast Iron Monarch	Dr. Guy R. Stoddard (Kiesewetter)

April, 1960—continued

Name	Parentage	Flowered by
POTINARA		
" Florence Elaine	<i>Slc. Anzac</i> x <i>Blc. Countess Hertha</i>	Thornton's Orchids (R. H. Gore)
" Sunrise	<i>Blc. Crusader</i> x <i>Slc. Prince Hirohito</i>	H. W. B. Schroder
VANDA		
" Englan Lim	<i>sanderiana</i> x <i>pumila</i>	Dr. Lim Swee Aun (Wm. Kirch)

CORRECTION TO AUGUST LIST, 1958:—

Parentage to *Lc. Westminster* should read: (*C. Mabel* x *L. anceps*) Chas. P. Slocum (Mansell and Hatcher).

NOTE:—*Cattleya Theodora* ign. does not exist, this hybrid being proved as (*C. Mrs. Myra Peeters* x *C. warneri*), the parentage of *Cattleya Mabel*.

CORRECTION TO JANUARY, 1960, LIST:—

For *Lc. Mimerdale* (*C. Mimir* x *Ennerdale*) read *Lc. Mimirdale*.

May, 1960

Name	Parentage	Flowered by
AERIDOVANDA		
" Dainty	<i>Aerides odoratum</i> x <i>V. Rothchildiana</i>	E. T. Iwanaga
ASCOCENDA		
" Charm	<i>V. pumila</i> x <i>Portia Dolittle</i>	M. Yamada
BRASSIDIUM		
" Ballerina	<i>Brassia caudata</i> x <i>Onc. Kanoa</i>	E. T. Iwanaga
BRASSOCATLEYA		
" Cornelius	<i>C. Rembrandt</i> x <i>Hartland</i>	M. Yamada
" Katherine H. Chatham	<i>B. nodosa</i> x <i>C. labiata</i>	E. A. Flickinger
" Plentiful	<i>Mrs. J. Leemann</i> x <i>C. skinneri</i>	G. Moir
BRASSOLEILOCATLEYA		
" Delfora	<i>Lc. Derrynane</i> x <i>Molflora</i>	Rivermont Orchids
" Gem	<i>Wren</i> x <i>Lc. Page Platt</i>	"
" Operette	<i>Lc. Van Der Weyden</i> x <i>Itamos</i>	Horticulture Flandria
" Opera	<i>C. Idettæ</i> x <i>Itamos</i>	"
" Winnie Kam	<i>C. Bob Betts</i> x <i>Nugget</i>	David C. Ai
CATLEYA		
" Costa Mesa	<i>Dorene</i> x <i>Bow Bells</i>	B. O. Bracey & Co.
" Dante	<i>Nonoska</i> x <i>dowiana</i>	Vacherot & Lecouffe p.f.f.
" Dorothy Ann Oyen	<i>Fort Worth</i> x <i>Enid</i>	Beville's Greenhouses
" Dorsay	<i>Brelan</i> x <i>Fabia</i>	Vacherot & Lecouffe p.f.f.
" Fort Worth	<i>Acolite</i> x <i>Serenity</i>	Beville's Greenhouses
" Mary Jane Proebstle	<i>Bob Betts</i> x <i>o'brieniana</i>	A. J. Proebstle
" Mem. Eugene Martin	<i>Dorothy Phelps</i> x <i>Bob Betts</i>	Beville's Greenhouses
CYMBIDIUM		
" h. Heidi Draper ign.		(Raised by Chalifoux, California)
" Karen Arblaster	<i>Alexanderi</i> x <i>York</i>	Colin C. Arblaster (L. Hatcher)
" Moslah Temple	<i>Alexfrida</i> x <i>Alexanderi</i>	Beville's Greenhouses
" Paris	<i>Pixie</i> x <i>Marcia</i>	Lord Hothfield
" Pearl Draper	<i>h. Heidi Draper ign.</i> x <i>Pearl</i>	Dorset Orchids
" Pearl Stream	<i>Pearl</i> x <i>Gulf Stream</i>	Burnham Nurseries
" Rosalba	<i>Rio Rita</i> x <i>Rosanna</i>	Lord Hothfield (McBean's)
" Seaborne	<i>Airborne</i> x <i>Ceres</i>	Burnham Nurseries
" Torbay	<i>Nam Khan</i> x <i>Pearl</i>	"
" Torbryan	<i>Jason</i> x <i>Eider</i>	"
CYPRIPEDIUM		
" Araleigh	<i>Burleigh Mohur</i> x <i>Aracorr</i>	L. Sherman Adams Co.
" Balablack	<i>Black Thorpe</i> x <i>Balaclava</i>	" "
" Baldenil	<i>Bordube</i> x <i>Balafine</i>	" "
" Betty Black	<i>Doris Black</i> x <i>Betty Darling</i>	" "
" Black Hill	<i>Black Thorpe</i> x <i>Clementine H. Churchill</i>	" "
" Black Moore	<i>Black Thorpe</i> x <i>Farnmoore</i>	" "
" Blackmorea	<i>Black Thorpe</i> x <i>Morea</i>	" "
" Clavagros	<i>Madge Le Gros</i> x <i>Clavaham</i>	" "
" Clavamohur	<i>Burleigh Mohur</i> x <i>Clavamoore</i>	" "
" Clavanorge	<i>Hanorge</i> x <i>Clavamoore</i>	" "
" Clavaway	<i>Stornaway</i> x <i>Clavaham</i>	" "
" Clementville	<i>Broville</i> x <i>Clementine H. Churchill</i>	" "
" Corred	<i>Corsair</i> x <i>Hestred</i>	" "
" Daniel Torrance	<i>Leven</i> x <i>Hellas</i>	Gordon M. Hoyt
" Darrente	<i>Corrente</i> x <i>Grace Darling</i>	L. Sherman Adams Co.
" Diana Leigh	<i>Dianalus</i> x <i>Burleigh Mohur</i>	" "
" Dianaling	<i>Diana Broughton</i> x <i>Betty Darling</i>	" "
" Dordogne	<i>Doræus</i> x <i>Banchory</i>	Vacherot & Lecouffe p.f.f.
" Dubarry	<i>Détaille</i> v <i>Hetaïre</i>	" "
" Elbaville	<i>Elbasan</i> x <i>Broville</i>	L. Sherman Adams Co.
" Elbettina	<i>Elbasan</i> x <i>Bettina</i>	" "
" Elbordo	<i>Bordube</i> x <i>Elbasan</i>	" "
" Eldarling	<i>Betty Darling</i> x <i>Elbasan</i>	" "

May, 1960—continued

Name	Parentage	Flowered by
CYPRIPEDIUM—continued		
" Erma Warne	Madelon x F. C. Puddle	Roy Umaki
" Ernest Hunter	Mildred Hunter x Ernest E. Platt	L. Sherman Adams Co.
" Euryloch	Euryostom x Moloch	"
" Fireball	Nesta II x Thias	Roy Umaki (Sherman Adams)
" Hamthorpe	Clavaham x Dixon Thorpe	L. Sherman Adams Co.
" Hanbury Hill	Major Hanbury Carlile x Clementine H. Churchill	"
" Hanorge	King George V. x Nitens-Leeanum	"
" Hawaii	Dervish x Vestalia	Roy Umaki
" Herbert C. Shipman	Lady Grace x F. C. Puddle	"
" Hillthorpe	Clementine H. Churchill x Oakthorpe	L. Sherman Adams Co.
" Leven Hill	Leven x Clementine H. Churchill	"
" Loch Hill	Ravenswing x Clementine H. Churchill	"
" Madgemohur	Madge Le Gros x Bromohur	"
" Megandun	Dunvegan x Megantic	"
" Milchurch	Mildred Hunter x Clementine H. Churchill	"
" Moore Hill	Clementine H. Churchill x Clavamoore	"
" Omar Hill	Clementine H. Churchill x Omar	"
" Ravenchurch	Ravenswing v Clementine H. Churchill	"
" Ravcliffe	Radcliffe x Ravenswing	"
" Ravenleigh	Ravenhunter x Burleigh Mohur	"
" Ravenstart	Ravenswing x Redstart	"
" Red Hunter	Mildred Hunter x Hestred	"
" Spectradina	h. Spectre ign. x Radina	"
" h. Spectre ign.		"
" Stacy Ishi	Lochinvar x Gaymill	Roy Umaki
" Sumelaine	Elaine II x Sumurun	L. Sherman Adams Co.
" Thorpehunter	Oakthorpe x Mildred Hunter	"
" Thorpeville	Broville x Dixon Thorpe	"
" Vernhill	Ingvern x Clementine H. Churchill	"
" Wilma	Blagrose x Cardinal Mercier	Burnham Nurseries
DENDROBIUM		
" Florence M. Yee	May Neal x Brown Derby	David C. Ai
" Gigolo	Cæsar x <i>johannis</i>	Y. Inouye
" Hawaii Kai	Lurline x Rose Chong	H. Nakamura (R. Matsumoto)
" Lady Hay	Lady Fay x Lady Hamilton	H. Kushima
EPIDENDRUM		
" Atronicum	<i>atropurpureum</i> x <i>phæniceum</i>	Jones & Scully
EPIDIACRUM		
" Stella	<i>Epid. vitellinum</i> x <i>Diacrium bicornutum</i>	E. T. Iwanaga
*EPILÆLIOCATTLEYA		
" Mint	Lc. Kahili Kea x <i>Epid. marie</i>	G. Moir
ÆLIOCATTLEYA		
" Bo Peep	Copper Charm x Balsam Lake	J. Milton Warne
" Delaroche	C. Mignard x Segond-Weber	Vacherot & Lecoufle p.f.f.
" Delibes	C. Lamartine x Marinette	"
" Derviche	Pontcarral x C. Marie José	"
" Dijon	Balzac x Segond-Weber	"
" Diplomate	Mermoz x Hertha	"
" Hi Time	Mem. H. A. Tracey x C. Thetis	Rivermont Orchids
" Kilaweia Iki	C. Bob Betts x Mysedo	T. Tomiyasu
" Mem. Maggie Hood	Aconagua x C. Enid	Beville's Greenhouses
" Meri Segars	C. Bow Bells x Amber Glow	Rivermont Orchids
" My Fancy	Molly Tyler x Camolty	"
" Nettie Beville	C. Fort Worth x Walter Winchell	Beville's Greenhouses
" Omaha	Joseph Hampton x C. Prospector	B. O. Bracey & Co.
" South Park	C. Reindeer x Integrity	"
*LÆLONIA		
" Ruby	<i>Broughtonia sanguinea</i> x <i>Lælia autumnalis</i>	G. Moir
MILTONIA		
" Nuuanu	Ketha x Etta	J. Milton Warne
ODONTIODA		
" Carol Anne	Pola x Margia	Charlesworth & Co.
" Darius	Aritea x <i>Odm.</i> Petit Ami	Vacherot & Lecoufle p.f.f.
" Don Quichotte	Balek x Sirias	"
ODONTOCIDIUM		
" Hermon Slade	<i>Odm. cordatum</i> x <i>Onc. varicosum</i>	G. Moir
" Selsfield Gold	<i>Onc. tigrinum</i> x <i>Odm.</i> Sunbelle	David Sanders Orch.
ODONTOGLOSSUM		
" Allport	Alorcus x Portheron	Charlesworth & Co.
" Dentelle	Petit Ami x Seddlescombe	Vacherot & Lecoufle p.f.f.
ODONTONIA		
" Debutante	<i>Milt. warszewiczii</i> x <i>Odm. cariniferum</i>	E. T. Iwanaga
PHALÆNOPSIS		
" Aristocrat	Snowbird x Grace Palm	Mrs. Lester McCoy
" Cupie	Celeste x <i>rosea</i>	"
" Diamond Head Rose	Doris x Pink Dawn	"
" Elisabeth Schwarzkopf	Dawn Mist x Rosy Cloud	Valleamar Gardens
" Emelia	Alice Bowen x Doris	Tony Gomes
" Evening Glow	Pink Dawn x Sunrise	Mrs. Lester McCoy

May, 1960—continued

Name	Parentage	Flowered by
<i>PHALÆNOPSIS</i> —continued		
„ John R. Miller	<i>amboinensis</i> x <i>Rothschildiana</i>	John H. Miller
„ Kealakaha	Admiral Stump x Mei Lin Wong	Edward Wong
„ Laura	Chief Tucker x Doris	Shaffer's Tropical Gdns.
„ Luisa	Chief Tucker x Winged Victory	
„ Princess Denise	Casablanca x Doris	Thornton's Orchids (Kono)
„ Richard J. Miller	<i>Rothschildiana</i> x <i>stuartiana</i>	John H. Miller
„ Robert W. Miller	<i>lindenii</i> x <i>sanderiana</i>	
„ Waikiki Blush	Pink Victory x Pink Sunset	Mrs. Lester McCoy
<i>POTINARA</i>		
„ Dorothy L. Adair	<i>Slc. Comuse</i> x <i>B. digbyana</i>	Fuchs' Orchids
„ Glowing Beauty	<i>Ble. Zanturano</i> x Red Friar	Rivermont Orchids
<i>RENANTANDA</i>		
„ Sunshine	<i>V. Cobber Kain</i> x <i>Ren. storiei</i>	G. Moir
<i>VANDA</i>		
„ Alicia Ono	Jennie Hashimoto x <i>sanderiana</i>	H. Ono (Hashimoto)
„ Dorothy Dittmer	Walter F. Dillingham x <i>Rothschildiana</i>	T. Shimamoto
„ Richard Warne	Princess Elizabeth x <i>sanderiana</i>	Nuuanu Orchid Gdn.
„ Wong Lai Pheng	<i>insignis</i> x Clara Shipman Fisher	Wong Ngooi Kong (S'pore Bot. Gdns.)

* New generic cross.

CORRECTION TO MAIN BOOK (1945):—

Under Line 50, Page 89, Tab. I, insert: *Cyp. Esmeralda* (*Maudiae* x *Enchantress*).

CORRECTION TO ADD. I, TAB. I, PAGE 265, LINE 43:—

Cattleya Lasmedon should read *Cattleya Laomedon*.

CORRECTION TO ADD. I, TAB. I, PAGE 273:—

Under Line 60, insert: *Cyp. Patience* (*Balaclava* x *Theseus*).

CORRECTION TO MARCH LIST, 1960:—

Delete *Cattleya Laomedon* (*Dorene* x *Bow Bells*), B. O. Bracey.
Lc. Mem. Albert Heincke should read: *Lc. Mem. Albert Heinecke*.

ORCHID SOCIETY OF NEW SOUTH WALES



THE ORCHID FESTIVAL

will be held at

SYDNEY TOWN HALL (MAIN HALL)

Tuesday 13th, Wednesday 14th, Thursday 15th,

Friday, 16th September, 1960

EXOTIC AND SPECTACULAR DISPLAYS

A greatly enlarged schedule

OPEN DAY AND EVENING

ADMISSION 2/6



Limberlost Orchid Seedlings

327	D. Schroederianum Bicolor x D. Salak, 4"	15/-
258	D. Lady Hamilton x D. H. Fukumura, 3"	15/-
97	V. M. Dinger (Java) x V. A. Fukunaga, 9"	30/-
256	V. Honolulu var. purpurea x Kon Tiki, 3"	10/-
288	V. Batemanii x (V. Sanderiana x R. Lena Rowold) 3"	10/-
377	V. Spathulata x V. Ellen Noa, 2"	7/6
368	D. Veratrifolia x D. Phalaenopsis Snow White, 3"	10/-
245	C. Loddigessii x L. C. Aphrodite, 4"	10/-
350	D. Pompadour x D. Peter Peterson, 3"	10/-
394	V. Hindsii x Joaquim var. Atherton, 5"	15/-

One plant of each of the above £6/-/-

Please add 7/6 to cover forwarding charges. 1960 Catalogues covering Orchids and Exotic plants available.

LIMBERLOST FERNBARK FIBRE

(With Sphagnum Additive)

Graded, dust free ready to use: An ideal orchid potting medium.

FINE

For Young Seedlings and Planting out flasks.

MEDIUM

Seedlings and Propagation to 4" pot

COARSE

Advanced and Adult plants.

Per Bag (Contents approx. 10 quarts) . . . 10/6 (3 bags for 30/-)

FROM

J. E. Jones,

"LIMBERLOST" NURSERY

P.O. FRESHWATER — CAIRNS — N.Q.

JOIN THE ORCHID SOCIETY OF N.S.W.

Membership entitles you to:—

- Twelve issues of the Monthly Circular containing Cultural Notes for each calendar month as well as a description of the various plants tabled for competition.
- A comprehensive Orchid Library—Books can be procured on loan for one month.
- Regular Monthly Meetings in the Y.W.C.A., Liverpool St., Sydney.
- A Letter Service for Country Members desiring cultural hints.
- Four quarterly issues of this Review if required.

Write for a nomination form to Secretary

K. LAMONT

42 LAWLEY CRESCENT, PYMBLE

DECAYED WOOD ORGANIC COMPOST

This compost is made in accordance with the formula published in the Australian Orchid Review. It is ready for use without further additions and has been successfully tried and proven over a period exceeding 5 years.

THE PLANTS DEFINITELY REQUIRE NO FURTHER FEEDING AT ANY TIME

PRICE 35/- per cwt. ex-nursery

NURSERY SUPPLIES

18 BUENA VISTA AVE.

DENISTONE. WL3180

SEED TO AGAR INOCULATIONS

Aseptic preparation of Knudson's Agar (Formula C) in 500 ml. Flasks and inoculation of medium with seed. Flasks fitted with rubber stopper and inverted glass U Bead (A.O.R. Dec. 1951). Prices 1 to 3 vessels £2/12/6 each, 4 to 6 vessels £2/2/6 each, 7-11 vessels £2 each, 12 or more vessels £1/17/6 each, half gross £1/12/6 each. Packing and freight charges extra on country and interstate orders. For optimal results it is recommended that flasks be inoculated as soon as possible after collecting of seed.

MINERAL SALT FORMULATIONS

MINERAL SALT FERTILISER (OHIO). 20/- per lb. (posted 22/6). FOR ORCHIDS.

MINERAL SALT FERTILISER (MISSOURI). 30/- per lb. (posted 32/6). FOR ORCHIDS.

W. H. BLACK

1st FLOOR, 185 OXFORD STREET (AT TAYLOR SQUARE), SYDNEY, N.S.W. PHONE: FA7462

ORCHID BOOKS, ETC.

ORQUIDEAS DE MEXICO (Edited S. A. Fournier), English/Spanish text, colour plates, £5.19.9d. Post 2/-.

ORCHIDS IN RETROSPECT—A Collection of Essays on the Orchidaceae (Oakes Ames), illust. £4. 4. 0. Post, 2/3d.

ORCHID GROWING (J. W. Bowers), illust., 6/-, Post 6d.

MALAYAN ORCHID HYBRIDS (M. R. Henderson & G. H. Addison), over 300 half-tone illusts. £4. 4. 0d. Post 4/-.

ORCHIDS (Foreword Gabriele Tergit), 12 beautiful colour plates, bound, 12/6. Post 6d.

ORCHIDS, THEIR CULTURE (Bruce Hogg, Melbourne), col. & b/w plates. £2. 10. 0d. Post 1/6d.

ORCHIDS OF GUATEMALA (Oakes Ames), illust., 2 vols., £6 17. 0d. Post 4/6d.

A.B.C. OF ORCHID GROWING (J. V. Watkins) illust., £1. 12. 6d. Post 1/6d.

SANDERS' ORCHID GUIDE. Revised (1927) Edition, £6. 8. 6d. Post 3/6d.

THE MODERN GREENHOUSE (J. S. Dakers) illust., £1. 6. 0d. Post 1/9d.

ALL ABOUT HOUSE PLANTS (M. Free), illust., £2. 9. 9d. Post 1/9d.

HANDBOOK ON DWARFED POTTED TREES—THE BONSAI OF JAPAN (K. Yashiroda & others), illust. 17/3d. Post 6d.

We search the world successfully for Rare and Out-of-print Books.

Also New and Second-hand Books on Australiana, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free.

We are Specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Compasses, Barometers, etc. Write for Lists.

10X British Achromatic Folding Magnifiers—of great use to Botanists. £3.11.6d.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

Kirkwoods

Orchid Coloured Slides (35 mm.)

All excellent duplicates

Order by numbers.

1. Queen Elizabeth's orchid bouquet, presented by the people of Cairns, Nth Queensland, on the occasion of her visit in 1954. Supplied by Kirkwoods.
2. Princess Alexandra's orchid bouquet, presented by the people of Cairns, Nth Queensland, on the occasion of her visit in 1959. Supplied by Kirkwoods.
3. Queen Elizabeth's official presentation box of Cooktown orchids, and their hybrids, air-freighted to Buckingham Palace, London, by the Queensland Government, on the birth of Prince Andrew, Feb. 1960. Supplied by Kirkwoods.
4. Laelia Cattleya Southland. (Catt. Dionysius x L. C. Hassalli.)
5. Vanda Jane Shimamoto. (V. Mary Foster x V. Sanderiana). From Hawaii.
6. Brasso Cattleya Milton. (B. Glauca x C. Lueddemanniana). From England.
7. Dendrobium Lady Fay. (D. Lady Hamilton x D. Lady Constance). From Hawaii.
8. Laelia Cattleya Ernestii. (C. Percivaliana x L. Flava.) From England.
9. Brasso Laelia Cattleya Angus (C. Helmsdale x C. Angus). From England.
10. Vanda Sanderiana. (Kirkwoods variety). From Philippines.
11. Dendrobium Bali. (syn. Sanders Crimson). D. Schroederianum x D. Taurinum.
12. Laelia Cattleya (name unknown).
13. Brasso Laelia Cattleya Milton. (L. C. Jubilee x B. C. Vilmos). From England.
14. Vanda Tatzeri (V. Sanderiana x V. tricolor). From Hawaii.
15. Vanda Onomea x Vanda trisher. From Hawaii.
16. Vanda Gertrude Miyamoto. (V. Mem. G. Tanaka x V. Sanderiana.) From Hawaii.
17. Vanda Ellen Noa. (V. Dearei x V. Sanderiana). From Hawaii.
18. Phalaenopsis violaceae. Specie orchid from Malaya.
19. Reed stem epidendrums in many colours, lavender, white, gold, red, etc., etc.
20. Reed stem epidendrums, landscaping of E. Radicans. Large orange.
21. Oncidium sphacelatum (Dancing lady orchid). Large specimen plant. Mexico.
22. Rhynchostylis retusa. Orchid specie from Java.
23. Dendrobium chrysoxum. Gold orchid. From India.
24. Dendrobium Schroderianum. (First Class certificate). Selfed. From Holland.
25. Dendrobium bigibbum var: phalaenopsis. (Cooktown orchid). Queensland's official floral emblem. From Nth Queensland.
26. Dendrobium Louis Bleriot. (D. superbiens x D. Schroderianum. FCC.) Produced from seed, by flask culture, by Kirkwoods Orchids at Cairns, N. Qld.

PRICES:	Single slides	5/6d. each	
	$\frac{1}{2}$ dozen lots	4/6d. each	27/-d. Total
	1 " "	4/0d. "	48/-d. "
	Set of 26 slides	3/9d. "	97/6d. "

We pay postage Send for sample slide, 5/6d.

Beautiful reproductions of orchid blooms, 2 x 2 slides. (35 mm.) from the best of our pictures.

All slides should be ordered by numbers.

Cash with orders.

KIRKWOODS ORCHIDS

342 Sheridan Street, Cairns North, North Queensland

(Coloured slide dept.)

R. E. TRENERRY**"TREMORVA ORCHIDS"**

8 BELLAMBI ST., NORTHBRIDGE

Gives an invitation to all interested in growing orchid plants under cool conditions. See the large range of genera that will grow and flower without heat.

Inspection Saturday afternoons or Sundays. Nobody asked to buy. Bring your problems and discuss them.

AUSTRALIAN ORCHID REVIEW

Published Quarterly.

Advertising Rates on application to

SHEPHERD & NEWMAN PTY. LTD.

Yurong Street and Hargrave Lane, Sydney

Telephone: FA3178

Orchids From India

All flowering size.

Aerides Lawrenceiae	Yellow & purple. Tipped with green	40/- each
Rhynchostylis Retusa	Waxy white with pink spots.	30/- "
Phaius Wallichii	Orange yellow with reddish purple	30/- "
Aerides odoratum	White & magenta	30/- "

AIRFREIGHT EXTRA.

FLOWERING SIZE

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS. NTH. QLD

Send for general price list of other orchids.

LOVELY

NEW LAVENDER PINK HYBRID

EPIDENDRON x REGINALD LEANEY

(REGD. FEB. '51).

A second release in Australia by the original raiser. The first release (Sept. '57) sold out in a few days and back orders have taken all plants up to now. If you missed one last time send immediately—I have built up a stock of 50 plants, some in bud—some in flower. Not cuttings. Established plants in 4" pots, all from the original plant. A very desirable locally raised hybrid, equal to the best anywhere in the world and very much better than many Epidendrons being imported into this country today.

COLOUR
SLIDES
AVAILABLE

EXTREMELY FREE FLOWERING, the parent has NOT BEEN OUT OF FLOWER SINCE 1951.

BIG HEADS, LARGE DELICATELY SHADED. FLOWERS. CLEAR LAVENDER PINK, VERY LONG LASTING, ON THE PLANT OR CUT.

PRICE 25/-

PACKED & POSTED 30/-

OVERSEAS 30/- Sterling

R. F. LEANEY, (F.R.H.S.) DEE WHY HEIGHTS, N.S.W., AUSTRALIA
PHONE: XW8177

PHONE: XW8177

ORCHID GROWERS !

Save Time

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year of 4 issues posted.

*Agents for the "Australian Orchid Review"
in Great Britain*

Messrs. B. F. Stevens & Brown Ltd.,

Library & Fine Art Agents,

77-79 Duke Street,

Grosvenor Square, W.1.

LONDON

are carrying stocks of current and back numbers of the *Australian Orchid Review*.

Readers in Great Britain should communicate with them regarding their supplies.

JUANITA NURSERY "The Home Of Exotic Plants"

Now have available seedling orchids in 1½" pots. They are in the first stage of growth after repotting from community pots. Listed below are a selection of orchids. Also available is a large variety of indoor foliage plants.

Phalaenopsis Doris x Storei (red)	12/6
Vanda Nellie Morley x Bill Sutton	7/6
Vanda Evanita Midkiff x Sanderiana	7/6
Den. Lady Faye var. Flame x Lady Faye	7/6
Catt. Granulosa x Maxima	7/6
Catt. Forbesii x L. Flava	7/6
Den. Mauna Kea x Gouldii alba	7/6
Den. Snowbird x Aerides (yellow)	7/6
Phalaenopsis Pink Sunset x Hi Ho	7/6
Aerides Lawrenceiae x Ascoglossom Calopetrum	7/6

29 La Boheme Ave., Caringbah, N.S.W.

Phone: LB7273

ALUMINIUM ALLOY *Waldor* Greenhouses PREFABRICATED

The Waldor "Junior"—Size: 8ft. x 12ft.

Price £103.15.0.

OTHER MODELS ALSO AVAILABLE

For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Road, Bexley, N.S.W.

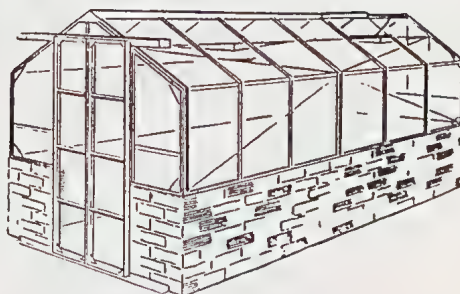
Phone LY7985

Tasmanian Enquiries:—

Tasmanian Chemicals Pty. Ltd.

129 George Street, Launceston
and

60 Harrington Street, Hobart.



SHOWY ORCHIDS (ADULTS)

In Aerides; Cymbidiums; Dendrobiums; Coelogyness; Cypripediums; Pleiones; Phaius; Saccoboliums; Rhynocostylis and Vandas—

50 diff. named £16 Stg.

25 diff. named £10 Stg.

Cypripediums Insigne in—

10 diff. named £5 Stg.

(All by air mail delivery)

Peter Smithers, M.P. 30 Smith Squire, S.W.1. England, writes—*Your Orchids are doing very well and most satisfactory. Give my name for reference.*

J. N. Pradhan

Flowerwood Nursery, Kalimpong, India.

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
“Orchidees”

31 Rue de Valenton

BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Orchids from India.**All flowering size.****All 30/- each.**

Dend. Parishii

Dark rose purple.

Dend. fimbriatum var. oculatum

Yellow. Maroon throat.

“ Formosum var.

White. Orange lip.

“ moschatum

Apricot.

“ giganteum

Yellow gold.

“ pierardii

Pale mauve.

“ aggregatum

Cream & yellow.

“ Hildebrandii

White and yellow.

“ Dalhousianum

Purple.

“ densiflorum

Yellow gold. Pendulous.

“ nobile var. pendulum

Pale to dark mauve.

“ Findlayanum

Pale pink. Yellow centre.

“ primulinum

Pale pink. Yellow centre.

“ transparens

Transparent pink & purple.

“ Farmerii

White with orange lip.

“ lituiflorum

Purple and yellow.

Add 3/- per plant for
airfreight. Minimum 5/6.

ALL PLANTS 30/- EACH. FLOWERING SIZE

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS, NTH. QLD.

Send for general price of other orchids.

No charge for packing.

“ Rhynocostylis retusa
“ Phaius Wallichii

Waxy white with pink spots.

30/- each.

Orange yellow with reddish purple.

30/- each.

Also available at **KIRKWOODS ORCHIDS, CAIRNS NORTH, NTH QUEENSLAND.**

**UNSURPASSED QUALITY
ORCHIDS**

by

(P. F. & F.)

VACHEROT & LECOUFLE

**AUTUMN AND WINTER SPECIAL
OFFERINGS**

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings

C.I.F. prices can be studied.

**ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE**

“La Tuilerie”—Rue de Valenton
**BOISSY ST. LEGER, SEINE & OISE
FRANCE.**

Telephone: 42

Cables: VALEC

Boissy St. Leger.

**ODONTOGLOSSUMS
ODONTODAS**

and allied genera in great variety are available
to you from the

**CHOICEST STOCK IN THE
WORLD**

**HIGH QUALITY MODERN
HYBRIDS**

in a wider colour range than exists in any other
generic group of orchids.

**NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.**

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Sir JOHN HALL BEST, 135 Macquarie St., Sydney. BU3322

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editors: G. H. Slade, Box 13, Homebush, N.S.W., A. B. Porter, 14 Henderson Rd., Eastwood; A. R. Persson, Coronation Ave., Mosman; J. C. Davis, 16 Jarrett St., Campsie

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

President: E. A. KNOBLAUCH

Patron: Sir JOHN B. CHANDLER

Honorary Secretary: K. McKENRY, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

Patron: His Excellency The Governor of Victoria, General
Sir DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Patroness: Lady BROOKS

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets First Thursday: Royal Society Rooms, Institute Building, North Terrace and Kintore Ave., Adelaide.

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: F. C. WOOD, 22 Stanley Street, Woodville.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

Patron: The Hon. Sir ROSS McLARTY, K.B.E., Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Secretary: H. E. Foote, 12 Rynie Ave., Como.

Treasurer: C. W. Connor, A.A.S.A., 42 Birkett Street, Bedford Park. Phone 71-3545

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Park. *President:* F. W. Chilvers. *Hon. Secretary:* B. R. Davis, A.C.A.
9 Chatsworth Street, Rose Bay. Phone: 2-9547

Armstrong & Brown

Proprietor: Clint McDade.

Manager: J. L. Humphreys.

**TUNBRIDGE WELLS
ENGLAND**

Solicit enquiries for
**COMMERCIAL AND EXHIBITION
ORCHIDS**

Unflowered and Flowered plants of all types available.
Splendid vigorous stocks raised from the finest parents.

VISITORS CORDIALLY INVITED

A personal visit to our greenhouses will demonstrate the
high standard of culture maintained.



Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

CHRISTMAS
ISSUE

Australian Orchid Review

PUBLISHED QUARTERLY

VOLUME 25, No. 4

PRICE 3/6

DECEMBER, 1960



Display by St. George Orchid Society at the Orchid Festival, Sydney Town Hall, 1960

THE OFFICIAL ORGAN OF THE ORCHID SOCIETY OF NEW SOUTH WALES, THE QUEENSLAND ORCHID SOCIETY, THE VICTORIAN ORCHID CLUB, THE ORCHID CLUB OF SOUTH AUSTRALIA, THE ORCHID SOCIETY OF WESTERN AUSTRALIA, AND THE TASMANIAN ORCHID SOCIETY.

Registered at the G.P.O., Sydney, for transmission by post as a periodical.

Orchids and Orchid Supplies

A splendid range of all types of Orchids suitable for Bush and Glass House culture is always available.

I have pleasure in announcing that I have been appointed Australian agent for Fred A. Stewart Inc. California, U.S.A., who are breeders of fine orchids for the Greenhouses and Gardens of the world.

Please forward your enquiries to this Nursery. Lists available.

Newly revised edition of our booklet "CYMBIDIUM ORCHIDS, NAMES & PARENTAGE", is now available. Posted, 5/6d.

CYMBIDIUMS. AUSTRALIAN RAISED SEEDLINGS, INCLUDING EARLY CROSSES, 15/- to £1 EACH.

CATTLEYS. LARGE SELECTION OF FLOWERING SIZE PLANTS AND SEEDLINGS. BOW BELLS, LANGLEY'S STRAIN. A LIMITED NUMBER OF THESE FINE ORCHIDS IN FLOWERING SIZE AVAILABLE IN JANUARY, £15 PER PLANT.

CYPRIPEDIUMS. BIG SELECTION OF HYBRIDS AND SPECIES.

DENDROBIUMS. HYBRIDS AND SPECIES.

MILTONIAS. SEEDLINGS AND SELECTED PLANTS. Some of the finest European Crosses ever seen will be available in January.

VANDAS. Top line HAWAIIAN CROSSES including NELLIE MORLEY, JOHN NOA'S 512 CROSS.

Japanese Osmunda Fibre 4/- lb. Tree Fern Slabs 4/- each. Atlas Fish Emulsion 13/6 pint. Peat Moss, Ready Mixed Compost, Pearlite and Sphagnum Moss. Wiss Orchid Shears 32/6 (postage 9d). Monarch Inside House Fogger 23/- (postage 1/-).

N.S.W. Agent for WALDOR GLASS HOUSES. These houses are in use at the Nursery and may be inspected there.

Plants sent to Anywhere in Australia and Overseas on request.

Please send 5d. Stamp for Price List.

OPEN SEVEN DAYS A WEEK

Frank Slattery

Phone

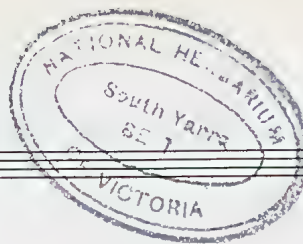
LY7985

12 EDDYSTONE RD., BEXLEY

(off Stoney Creek Rd., opp. Bexley Park)

Phone

LY7985



DORSET ORCHIDS LTD.

CYMBIDIUM SPECIALISTS

Our new seedling list is now ready, and will of course be sent out to all those whose names are on our mailing list.

However, if your name is not on the list, and you want a copy, please let us know as soon as possible, as the demand for the new hybrids will be heavy and supplies may have to be limited.

DORSET ORCHIDS LTD.

PLUSH, DORSET, ENGLAND

Telegrams and Cables: "Orchids, Dorchester"



JUDY

From this Season's very successful flowering Dos Pueblos offer you the following seedlings which are crossings we can recommend.

For quality and size these seedlings are second to none—

- D.P. 4033 JUDY
- D.P. 4046 Rosalita Dos Pueblos x Rosanna Pinkie FCC/RHS pinks, off whites, consistently good.
- D.P. 4036 ANN GREEN
Rosanna Pinkie FCC/RHS x Babylon Castle Hill FCC/RHS tetraploids of outstanding quality.
- D.P. 4062 MAZATLAN
Nam Khan FCC/RHS x Alexanderi Westonbirt large flowers of beautiful substance.
- D.P. 4077 BALKIS
Alexanderi Westonbirt FCC/RHS x Rosanna Pinkie FCC/RHS. Award standard flowers, whites, blush whites.
- D.P. 4103 ETTA BARLOW
Rosanna Pinkie FCC/RHS x Balkis Perfection. What a wonderful cross, once again has produced award standard flowers.
- D.P. 4108 GRACE MITCHELL
Alexanderi Westonbirt FCC/RHS x Apollo Exbury FCC/RHS. August flowers of outstanding size and colour.
- D.P. 4149 NANDI
Shiraz Mary Bea x Miretta Glendessary BM/CS. Early June and July LARGE flowers, yellows and greens.
- D.P. 5043 ROSANNA PINKIE FCC/RHS x ENID HAUPT
Pinks and Blush Whites—RECOMMENDED.



Mail orders are
carefully filled.
Inquiries are
invited.

Telephone:
98-6321

P.O. BOX 90

(AUST.) PTY. LTD.

DEE WHY

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.

FIRST CLASS CERTIFICATE

Cymbidium BURGUNDIAN 'CHATEAU'

(C. Remus x Babylon 'Castle Hill') VOTES UNANIMOUS. Natural spread 4 inches; petal width 1½ inches, sepal width 1¾ inches.

"Seven flowers were shown, beautifully spaced on a semi-arching spike.

Yellow and purple colouring combined gave a delightful coppery shade to the petals and sepals, while the splendid large rounded lip was flushed rich deep rose, and had an attractive crimson design. A wonderful lip on a wonderful round flower."



Rarer Plants

Importers

OFFER A LIMITED RELEASE
OF VERY HIGH QUALITY ORCHIDS

P.O. BOX 18, KILLARA N.S.W.

Telephone: JX2698

CYMBIDIUMS

BURGUNDIAN 'CHATEAU' F.C.C. R.H.S. 1959	£750	0	0
ROSANNA 'PINKIE' F.C.C. R.H.S. 1831	150	0	0
RUNNEMEDE F.C.C. R.H.S. 1951	250	0	0
PRINCE CHARLES 'PINNACLE'	350	0	0
MADONNA 'ICEBERG.' A peerless pure white self	100	0	0
TINSEL 'BROCADE' A.M. R.H.S. 1951	250	0	0
ROSINANTE 'PERFECTION PINK'	350	0	0
BULLFINCH EXBURY A.M. R.H.S. 1948	50	0	0
MIRETTA 'MATCHLESS' A.D. O.S.N.S.W. 1958	10	0	0
ARGOSY 'ARISTO.' Superb Yellow	500	0	0



LIMBERLOST ORCHID SEEDLINGS

THE NEW **Q** LIST

ONLY SELECTIONS OF FINEST QUALITY
IMPORTED STOCK OFFERED

Other available Lists cover:—

QUEENSLAND NATIVE ORCHIDS
"ORCHIDISE YOUR GARDEN"
LIMBERLOST EXOTIC PLANTS

FROM

J. E. Jones, "LIMBERLOST" NURSERY
P.O. FRESHWATER — CAIRNS — N.Q.

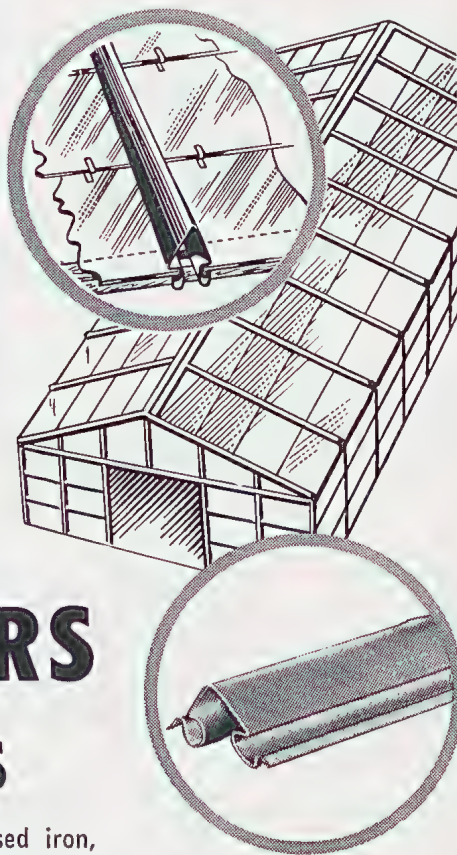
It's easy to build
 or extend glasshouses
 with

MALLEYS

GLAZING BARS

(Glasshouse Rafter)

and GLASS CLIPS



Strongly constructed from heavy gauge galvanised iron, Malleys Glazing Bars and Glass Clips make glazing of the sides and roof of a glasshouse an easy task. They are designed to hold the glass securely in place and provide a perfect seal against the weather.

Supplied in 8 ft. lengths, Malleys Glazing Bars are slightly tapered at one end enabling them to be joined together to make up any required length.

Efficient • Safe • Portable

MALLEYS

GARDEN INCINERATOR

- Heavy-gauge steel construction
- Built-in chimney • Removable grate • Round hinged lid with lifting handle • Ready for immediate use (no flue needed).



These famous Malleys products are obtainable from your hardware store.

MALLEYS

BUILT BETTER TO SERVE YOU BEST

Sydney • Melbourne • Brisbane • Adelaide

FREE PLANS AND BUILDING INSTRUCTIONS for a simple, all-purpose glasshouse. Send this coupon to Malleys Ltd., Advertising Dept., 50 Mountain Street, Broadway, Sydney.

Please send me details of Glazing Bars (including free glasshouse plans).

Name

Address

..... State

THE WORLD'S MOST EMINENT AND SUCCESSFUL BREEDERS OF OUTSTANDING HYBRIDS

Exhibition Hybrids of unparalleled quality . . . Specialists in all kinds of cut flower orchids . . . Lists of our seedling Cattleyas, Cymbidium, Odontoglossum and Cypripedium sent upon application . . . Visitors are most welcome. Our houses are bright with flower throughout the year, making a visit always of interest.

A Special Offer of a box of our fine New Cattleya Hybrids

Six superbly sturdy seedlings, 4 sturdy bulbs from 2 inch pots, to flower after two years.

Cattleya Aurea x L.C. Apricot Gleam.
L.C. Gloria x C. Ballantineana
Cattleya Maggie Raphael alba x L.C. Cynthia, alba var. Model.
L.C. Ettrick Rich copper x L.C. Clothilde, rose copper.
L.C. Snowdrift x L.C. Cynthia var. Model.
B.L.C. E. F. Hanbury x B.C. Hartland.

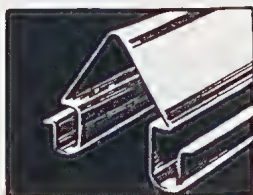
Six Fine Young Plants as listed, sent by Air Parcel Mail, all charges, paid and insured—
for—Twelve pounds ten shillings sterling.

Descriptive List sent upon application.

STUART LOW (Benenden) LTD.
JARVIS BROOK, CROWBOROUGH, SUSSEX, ENGLAND

GLAZING BARS AND CLIPS SIMPLIFY GLASSHOUSE CONSTRUCTION

GALVANISED RAIL FITTINGS



Clips or Tees	No.	Rail Standard	Price
	107	$\frac{3}{4} \times \frac{3}{4}$	1/10 ea.
	108	$1 \times \frac{3}{4}$	1/10 ea.
	109	1×1	1/10 ea.
Corner Fittings	186	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	4/6 ea.
	180	$\frac{3}{4} \times 1 \times \frac{3}{4}$	4/6 ea.
	181	$1 \times 1 \times 1$	5/3 ea.
Crosses	106	$\frac{3}{4} \times \frac{3}{4}$	3/2 ea.
	105	$\frac{3}{4} \times 1$	3/2 ea.
	104	1×1	4/5 ea.
Knobs	155	1	1/8½ ea.

$\frac{3}{4}$ Galv. Pipe	1/0½ per ft.
1 Galv. Pipe	1/5 per ft.
8' Galv. Blazing Bars	6/- per len.
Glazing Bar Clips	5/- per 100.

16 x 14 x 21 Horti-
tural Glass 64 sheets to
case = 100 sq. ft. 93/3 per sq. ft.
Loose extra

**SWANS
LTD.**

SYDNEY
PARRAMATTA
HURSTVILLE
CHATSWOOD
WOLLONGONG

406/410 Elizabeth Street **B0931**
49 Aird Street **YL0681**
135 Forest Rd. **57 0311**
732 Pacific Highway **JA3462**
67/69 Burelli Street **B3301**

LUGARNO WOOD FIBRE ORCHID COMPOST

(IMPROVED SAWDUST FORMULA)

Composted and Pasteurized by the latest scientific techniques. Composts manufactured in our own indoor commercial and composting pasteurizing rooms.

WEED AND PEST FREE!

*Supplied in three bushel bags; Nett weight 115 lbs.
25/- per bag. N.S.W. free delivery.*

Interstate and Overseas orders freight forward.

Substantial discounts for ten bags or more.

LUGARNO INDOOR PLANT POTTING MIXTURE

(Not suitable for orchids)

1 x sugar bag 12/-	} Free delivery SYDNEY and suburbs. Country, Interstate and overseas orders freight on.
1 x 3 bush bag 25/-	

STERISOIL: for sterilizing home made composts.

1/- fl. oz., or 68/- gallon. Freight extra.

AGAR CULTURE MEDIA, Knudson's Solution C.

For Orchid Seed germination and culture.

40 fl. oz. containers with Solution C already sterilized ready to inoculate seed, £1/5/- each, plus postage.

40 oz. containers inoculated with your own seed, £1/11/6 each. Plus postage.

ENQUIRE ABOUT OUR QUANTITY DISCOUNTS

SCIENTIFIC COMPOSTS (Regd.)

917-919 Forest Road,

LUGARNO, SYDNEY, N.S.W., AUSTRALIA

Telephone: SYDNEY: 53-9377

Cables & telegrams: MUSHROOMS. LUGARNO, N.S.W.

Also at—**Frank Slattery**, 12 Eddystone Road, Bexley. Telephone LY 7985

T. W. Sessions, 53 Chandos Street, Ashfield.

Austens Nursery, Princes Highway, Sutherland.

New South Wales Distributors: Shop Trade Only—

A. J. Bush & Co.

45 Parramatta Road, Homebush

Telephone: 76-0356

Arthur Yates & Co.

Sussex Street, Sydney

Telephone: 29-6771

ORCHIDS

of Quality



C. H. DEANE

GIRRAHWEEN NURSERY

PARK and GREEN STREETS, GLENBROOK
NEW SOUTH WALES

Telephone Glenbrook 481

BLACK & FLORY Ltd.

SLOUGH, BUCKS., ENGLAND



We have a large number of flowered and unflowered Cattleyas, Cymbidiums and Cyripediums for sale now, and are able to despatch to Australia throughout the year due to our proximity to London Airport.

Lists of plants will be willingly sent to enquirers. Please state in what genera interested.

The Largest Hybridisers of Cymbidiums in Australia

30,000 Seedlings always in Stock

All plants hybridised and grown in our own nursery.

Recognised as the finest value ever offered. Our prices defy competition.

in 4" pots from 15/- to 20/-	} ex Nursery
in 6" pots from 25/- to 30/-	

Early flowering and exhibition crosses always available. Divisions and full clones of flowering plants now available.

Write for list of crosses available.

Special compost from selected components available at 25/- per sack, ex-Nursery

Nursery open Monday to Friday, 8 a.m. to 5 p.m., as from 1st June to 30th October. Will be open all week-ends for inspection of seedlings in flower.

Our seedlings are also available at list prices from Mr. F. Slattery, Bexley, and Mr. H. Bond, Marmong Point, Teralba.

WONDABAH ORCHIDS PTY. LTD.

724 Pennant Hills Rd.
Carlingford, N.S.W.

Tel. WM2959

Tel. WM2959

you are invited

to come see the breath-taking display of beautiful orchid blooms at GREEN-ACRES ORCHID FARM, where a massed display of cypripediums, dendrobiums, miscellaneous orchids and indoor plants provide a rare spectacle not to be missed! Meet and talk with Roy Deane on the growing and cultivation of orchids and indoor plants. If you are interested in participating in the pleasurable and profitable hobby of growing cymbidiums for the flourishing export trade, Roy Deane's experience as a grower and exporter is available to you. Quality Cymbidium blooms are in big demand overseas, and propagations from these plants are available at reasonable prices. Ask for special price quotes for your individual requirements. There is always something to interest visitors to Greenacres.

Wholesale and Retail Suppliers

GREENACRES ORCHID FARM

Great Western Highway, Valley Heights

Telephone Springwood 129

ORCHID SEEDLINGS

AWARD PLANTS OF THE FUTURE

BUY ENGLISH-RAISED CYMBIDIUM SEEDLINGS AND BE SURE
OF THE BEST OBTAINABLE

Almost all the best Cymbidiums throughout the world come from English-raised seedlings or stock, because the English growers have a century of hybridising experience, combined with the latest scientific knowledge in this field.

The latest English hybrids will continue to lead, as they are the result of a combination of science, art and long experience.

I have several thousand Imported Cymbidium seedlings from the best growers in England available for your selection, in all sizes to full flowering size, at prices ranging from 15/- to £6.

Even if you are not fortunate enough to select a future champion, you can be quite sure that English seedlings will be above-average, and amply repay your investment. Many seedlings flowered by my clients are now worth hundreds of pounds.

Some of the new crosses have been specially developed for the Export trade in blooms to the States, and will produce what are classed as 'Premium' blooms.

COUNTRY ORDERS

Speedy execution of Country Orders will continue to receive my personal attention, and I will spare no pains to continue to give all my country clients entire satisfaction by the selection of fine plants and sound packing. Your money will be cheerfully refunded if you are not satisfied.

I have the following seedlings and plants to offer this season:—

Flowering size English Odontiodas and Odontoglossums.
Miltonia seedlings, full flowering size, at 50/-
Hawaiian Dendrobium seedlings of the best crosses, from 8/6.
Hawaiian Vanda seedlings, latest crosses of the highest quality, from 10/-.
French and American Phalaenopsis seedlings, ranging in price from 15/- to £5, according to size and cross.
Interesting new Epidendrum, Diacrum and Allied Intergeneric Seedlings.
Some exceptional Sophrolaeliocattleya seedlings, expected to equal or surpass S.L.C. Anzac.

I have a very large stock of imported Cattleya seedlings in all sizes for you to select from. These range in price from 12/6 for small seedlings, and from 55/- for seedlings of full flowering size. Many Cattleyas can be easily grown in the bush-house and are well worth trying.

If you are unable to call, please send for current list of Orchid seedlings. I will be pleased to advise you in your choice, and suggest that you ask one of your friends who has purchased plants from me by mail for his frank opinion.

For Interstate and country orders, please allow 5% for packing and freight charges; minimum charge 3/-, maximum charge 25/-.

WILLIAM de BRUYN
ORCHIDHOLME

WINDSOR ROAD AND MEMORIAL AVENUE, KELLYVILLE

Telephone: Kellyville 333

(Bus service from Parramatta Station stops at door)

*Stewart-bred Cymbidiums and Cattleyas
are known throughout the world
for their quality.*

Over 80,000 square feet devoted entirely to breeding and growing fine Cymbidiums and Cattleyas in infinite and beautiful variety for your collection.

Every day shipments go out to the far corners of the world to those who demand the finest breeding in Cymbidiums and Cattleyas. May we have the privilege of serving you?

We are pleased to announce the appointment of Mr. FRANK SLATTERY as our Australian representative. Mr. Slattery will be happy to send you our free illustrated catalogues on Cymbidiums and Cattleyas. He will also be happy to supply you with information on the simplicity of importing our Orchid stocks. Please address inquiries to: Mr. Frank Slattery, 12 Eddystone Rd., Bexley, N.S.W.

Fred A. Stewart, Inc.

8606 East Las Tunas Drive

San Gabriel, California

BREEDERS OF FINE ORCHIDS FOR THE GREENHOUSES AND GARDENS OF THE WORLD

KIRKWOODS ORCHIDS

Send for free
and complete
Price List



A section of our 30,000 plants of Vanda Joaquim.

Phalaenopsis.

- Phal. Lachesis x Lachesis (1147)
Phal. Amabilis Lily Koster x Margaret Bean (1155)
Phal. Cendrillon x Fanchette x Margaret Bean (1154)
Phal. Lachesis x Lachesis (1130)

15/-
each 3"
across

30/-
each
6" to 12"
high

- 830 Dendrobium veratrifolia x Dend. taurinum.
964 " broomfieldii x Dend. taurinum.
772 " Hawaii Nui x Dend. stratiotes
836 " Schroderianum x Dend. taurinum
1021 " Toftii x Dend. phalaenopsis alba.
218 " veratrifolia x Dend. broomfieldii.
" Louis Bleriot (D. superbiens x Schroederianum FCC).

- 689 Vanda Miyamoto x Vanda Dearei
643 " tricolor x Vanda Luzonica.
868 " Miyamoto x Renanthera Storei
730 " suavis x Renanthera Storei
942 Arachnis Ishbel x Vanda Manila

30/-
each 6" to 12"
high

15/-
each
4" to 6"
high

- 830 Dendrobium veratrifolia x Dend. taurinum
964 " Broomfieldii x Dend. taurinum
1021 " Toftii x Dend. phalaenopsis alba
772 " Hawaii Nui x Dend. stratiotes
" Louis Bleriot (D. superbeins x D. Schroderianum (FCC.).
1037 " Bali x Dend. Mauna Kea.

- 643 Vanda tricolor x vanda Luzonica.
689 " Miyamoto x vanda dearei
882 " Mary Foster x Vandopsis lissochiloides.
" flammerolle x vanda suavis.
650 " Boschii x vanda Sanderiana.

15/-
each 4" to 6"
high

Add postage and air freight.

KIRKWOODS ORCHIDS

342 Sheridan Street, Cairns North, North Queensland.

Phone: 2385

Miscellaneous Orchids

We have the largest range of Miscellaneous Orchids ever offered for sale in Australia. You are now able to purchase your Phalaenopsis seedlings at Dos Pueblos.

Grace Palm x Self £2.5.0.

10% discount of quantities of 12 or more plants in any one order.

Cattleyas Schilleriana, Loddigestii, Walkeriana, Citrina, Bowringiana, Brassavola Glauca, Digbyana.

Miltonias—*a wide range of beautiful crossings.*

Oncidium Tigrinum, Sarcodes, Varicosum, Rogersii, Marshallianum, Flexuosum, Micropogonum, Pumilum, Chierophorum.

Odontoglossums, laeve, citrosmum, grande, rossii, cordatum.

Epidendrum Vitellinum Majus, Cynoches Chlorochilum.

Chysis Bractescens, Lycaste Cruenta, Dowiana, Candida, Skinneri.

Sophranitis Grandiflora, Bifrenaria tyranthina.

Stanhopea Graveolens, Huntleya Meleagris.

Catasetum pileatum.

**Have you tried Dos Pueblos steam sterilised ready mixed compost?
Eradicates weed problems and fungus diseases**

We have a large stock of all orchid growers requirements.

Free delivery in metropolitan area



Orchid Company
(AUST.) PTY. LTD.

Country visitors
especially invited
to visit our
Nursery.

Telephone:
98-6321

P.O. BOX 90

DEE WHY

Situation: South Creek Rd., Dee Why, N.S.W.

N.S.W.

Half-Price Christmas-New Year Special Gift Parcel

Twelve excellent Award and Show Type Varieties, comprising early, mid-season and late flowers.

Celia Tanandra, Green.	Arabella Waverley, H.C., A.M., Cream.	Dracula No. 1, Yellow.
Louis Sander, Girrahween, Mauve Pink.	Ceres F. J. Hanbury, A.D., Red.	Swallow Conquest, H.C., Apricot.
Charm Elegance, A.M., H.C., Deep Pink.	Princess Elizabeth Allambie, White Pink.	Swallow Daffodil, H.C., A.M., Yellow.
Gloriana Tudor Rose, Pastel Pink.	President Wilson, Haberfield, Yellow.	Cygnus Janet, Golden.

£12-10-0 per dozen (or 6 for £7-10-0) for Young Green Plants.
£24-0-0 per dozen (or 6 for £15-0-0) for Flowering Size Plants.
(Add £1 extra for air freight).

SPECIAL FINANCIAL SERVICE FOR NEW ZEALAND CLIENTS

New Zealand clients who experience any exchange difficulty in forwarding payments for their purchases to Australia may now avoid this difficulty by forwarding their remittances by cheque or money order (payable to "C. W. Bushell, Jr.") to our New Zealand representative, The Bank of N.S.W., Wellington. Send only the remittance to the bank; the order should be forwarded direct to the nursery.

FREE!

Free copy of 1960
"Catalogue and Price
List" now available.



Young Green Plant.



Flowering Size Green Plant

Haberfield Orchid Nursery

The Oldest Established Commercial Cymbidium Specialists in Australia

37 Dobroyd Parade, Haberfield (Sydney), N.S.W. Australia
C. W. BUSHELL, Jr.

(Near Mortley Avenue)

UA5895, YX2531

Australian Orchid Review

DECEMBER, 1960

VOLUME 25

No. 4

The author of each article is responsible for the facts and opinions expressed herein.

Contents

ARTICLES

Australian Orchid Council— <i>W. R. Smoothey</i>	168
A Selection of Fifty Species Orchids— <i>L. Wilbur Zimmerman</i>	169
Position is Everything— <i>H. G. Burley</i>	171
Cymbidiums and Colour— <i>J. N. Rentoul</i>	172
History of Orchids in West Australia	174
Orchids with Terete Leaves— <i>G. H. Slade</i>	175
Exports of Orchids from Australia	176
Orchids on the Barrington— <i>Noel C. Jupp</i>	177
An Organic Compost for Cymbidiums— <i>W. Potts</i>	184
Sarcochilus of North Queensland— <i>K. Wadsworth</i>	187
Society News and Spring Shows	188-201

ILLUSTRATIONS

Cymbidium Dorchester 'Jeanette'	179
Cymbidium Babylon Castle Hill x Rosalita var. Burgundy	180
Lycaste Sunrise x Balliae 'Greycliffe'	180
Cymbidium Anita 'Diane'	180
Epidendrum Goodale Moir	181
Dendrobium Winifred Fortesque 'Wondabah'	181
Cymbidium Etta Barlow 'Dover Heights'	181
Sarcochilus Hartmanii	182
Oncidium Kramerianum	182
Oncidium Papilio	182
District Exhibit, 1960 Orchid Festival	Front Cover

Editorial Committee: G. Hermon Slade, A. B. Porter, J. C. Davis.

Please address all Editorial Matters to:

G. HERMON SLADE, Box 13, Homebush, N.S.W.

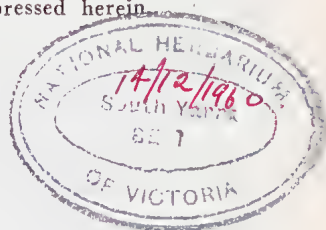
Associates:

QUEENSLAND:	VICTORIA:	SOUTH AUSTRALIA:	WESTERN AUSTRALIA:	TASMANIA:
P. K. Searle Groth Rd., Zillmere Brisbane	J. N. Rentoul 43 Denman Avenue Glen Iris, S.E.6.	W. Harris 17 Old Belair Rd., Mitcham	S. P. Hall 18 Carnarvon Cres., Mt. Lawley	F. W. Chilvers 1 Lassuade Ave. Sandy Bay

Articles, photos, and drawings are invited, and may be forwarded to any of the above gentlemen, for publication in the *Australian Orchid Review*.

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of their advertising neither the Proprietors of the "Australian Orchid Review" nor the affiliated Orchid Societies can assume responsibility for any transactions between their advertisers and their readers.

Subscription Rates: Australia and New Zealand, 12/6 per annum; Overseas, 12/6 sterling per annum. Post Free. Payable to Shepherd & Newman Pty. Ltd., Yurong St., Sydney, Australia.



Australian Orchid Council

• On the 14th September, 1960, what may well be a most important step forward was taken so far as orchids in Australia are concerned. Readers will recollect that earlier this year in an open letter published by the then President of the New South Wales Orchid Society, reference was made to the need for some properly constituted central Authority.

This was intended to refer to an Authority constituted on democratic lines and attention had been focused on the need for such a development by certain events that had occurred and which could have resulted in certain misunderstandings not only in Australia but abroad.

A draft Constitution for an Australian Orchid Council was prepared and circulated to the Orchid Societies or clubs representing the majority of the orchid growers in each of the States of the Commonwealth. Criticism of the draft was invited and when the various suggestions had been co-ordinated each of the State Authorities was invited to send a representative to an inaugural meeting held at Sydney on the 14th September, 1960, a date coinciding with the Orchid Festival. At this meeting, which was held in one of the private rooms of the Hotel Metropole, the Queensland Orchid Society was represented by Mr. Harveyson (who at short notice took the place of Sir John Chandler, who was unable to be present because of ill-health); the Orchid Society of New South Wales was represented by Sir John Hall Best, that Society's then President; the Victorian Orchid Club was represented by Mr. G. McCraith, the President of that Club; the Tasmanian Orchid Society was represented by Mr. Chilvers, that Society's President; and the Orchid Society of Western Australia was represented by Mr. S. P. Hall. Each of these representatives had been authorised by his respective Society or Club to take all the necessary steps required to establish the Australian Orchid Council.

Sir John Hall Best was requested to occupy the chair of the meeting and he acceded to that request. The draft Constitution was then considered clause by clause and subject to a number of minor alterations it was adopted. The Office Bearers elected for the ensuing 12 months were—President, Sir John Hall Best; Vice-President, Mr. Gerald McCraith; Registrar-General of Awards, Mr. W. R. Smoothey; Honorary Treasurer, Mr. T. C. Harveyson;

the office of Secretary was left to be filled by a nominee of the President.

The objects of the Australian Orchid Council as set out in the Constitution are as follows—

- (i) To advance and promote the culture of orchids.
- (ii) To formulate, carry out and encourage schemes for betterment of orchid culture.
- (iii) To receive and disseminate information relating to orchid culture.
- (iv) To advise, receive and disseminate information relating to the judging of orchids and the standards to be adopted for such judging.
- (v) To work for a uniform standard of judging and judges throughout the State Authorities, but until such has been voluntarily agreed to by unanimous decisions of the representatives of the State Authorities to recognise the State Authorities as the sole authority to grant awards for orchids in the State.
- (vi) While recognising the supremacy of the State Authorities within their respective States, to uphold the honour and unity of the State Authorities and to encourage the cordial exchange of information and ideas among the State Authorities and their members.
- (vii) To act as the medium for communicating with national orchid organisations outside the Commonwealth on behalf of the State Authorities in matters common to such authorities.
- (viii) To act when and if requested so to do on behalf of the Council and for any one or more of the State Authorities in connection with any matter appertaining to orchids.
- (ix) Generally to do all things possible to promote the interests of orchid growers, the State Authorities and the Council.

As The Australian Orchid Council will be able to speak for probably 95 per cent of the people who grow orchids in Australia, one of the first actions that the Council decided to take was to consider affiliation with the Royal Horticultural Society and the National Orchid Societies of other countries.

The creation of the office of Registrar-General of Awards is the initial step in what is intended to be one service to member Auth-

crities and to orchid growers generally. Details of judging standards, judging requirements and awards will be obtained from the member Authorities in the first instance and then from other National Orchid Authorities. The codified information will be available from the Registrar-General of Awards to members on request. This officer will also be available for reference and advice on matters pertaining to Judges, judging and awards.

It is more likely than not that other opportunities of service to orchid growers will arise and the new Council wants to be in a position constitutionally and functionally to render the assistance or service that might be reasonably sought.

History, of course, will tell whether or not the Council does fulfil the high hopes for

it that were expressed at the inaugural meeting, but if the enthusiasm and sincerity of purpose of those who were present at the inaugural meeting mean anything, then the Australian orchid growers can confidently anticipate that their interests will be looked after to the utmost extent that this is practicable.

W. R. Smoothey,

Registrar-General of Awards.

[Editor's Note: Orchid growers generally will be most interested in the achievements of the Australian Orchid Council and will want to say "Thank you" to Sir John Hall Best for his foresight in conceiving the Council and his drive and tenacity of purpose in bringing the Council into being.]

It is with great pleasure we welcome the Orchid Club of South Australia as a participating member of the Council, news of which has just been received. The Council is thus truly representative of all Australian State Orchid authorities.

A Selection of Fifty Species Orchids

L. WILBUR ZIMMERMAN

(Philadelphia, Pennsylvania, U.S.A.)

• Out of an estimated eight thousand known species, how would anyone pretend to make a representative selection encompassed by such a small number as fifty?

First you can eliminate huge segments of this vast number of recorded orchids because of lack of colour or size. For a very rough guess we might say two or three thousand would suffice to include the showier members of the tribe. The larger portion can be relegated to the area truly known as botanicals. True enough there are a surprising number of the so-called "Botanicals" which are of high interest, because of their colour, shape, habit of inflorescence or their very individual style.

It still leaves a very large number of orchids to select from in making a collection.

From the start it will have to be considered in the nature of an anthology. A collection that depicts the vagaries of the mind of the selector as much as any other one thing.

This group is arranged, however, to give a spread of season. It has been chosen with an eye to including almost as many genera as possible within the limit of fifty. It has been chosen to show the wide range of colour, form, habit and size of orchids. There is some slight attention to the range of geography, in relation to the countries of origin of the various species.

Other than this there can be no apology for any exclusions. There are no prejudices against a particular genus or species, but only preferences among them.

Since my wife and I already grow and enjoy some seven hundred different species in about one hundred genera, some hard decisions had to be made in this selection.

We live in the eastern central part of the United States in the area between the Appalachian Mountain range and the Atlantic Ocean, about seventy-five miles inland. We have some thirty to forty inches of rainfall a year; spread pretty much over the year. Some drought periods of six to eight weeks do occur occasionally. Much of the summer weather is humid, often running above 90 per cent relative humidity. Fall and spring are periods of roughly ten weeks each. Winter from about December first until March first have freezing temperatures fairly continuously, occasionally going down to zero Fahrenheit.

I relate the above to try to give a brief exposition of our climate. We can place plants outdoors from about May fifteenth until about October first, which represents our warm season. The rest of the year things must be under glass and be supplied with artificial heat. In our case this is an oil fired hot water boiler and hot water pipes.

Now we should turn our attention to the actual species we have selected. The first group of fourteen are those that bloom in the spring for us.

(1) *Arpophyllum spicatum*. Mexico.

Height of plant 15 inches, spike plus or minus seven inches. Flowers rose purple, basket

lip, presented in a cylindrical raceme, individually small, but because of compact and regular arrangement, and bright colour, the plant is most showy. Culture will do as much as Cattleyas do.

(2) *Broughtonia sanguinea*. Jamaica.

This representative of small Carribean genus is allied to *Epidendrum*, the habit is compact, pseudo-bulbs $1\frac{1}{2}$ or 2 inches in height, leaves three or four inches. Flowers light to deep blood-colour, over an inch in diameter, full and round form, borne in panicles and flowers for four to six months at a time. Culture: Bright light. Intermediate temperature, when growth is completed, water sparingly. *Osmunda* or tree fern recommended as a compost.

(3) *Cattleya skinneri* var. *alba*. Guatemala.

Flowers pure glistening white, 3 to 8 flowered, 2 to 3 inches across, clustered. Habit of plant like *C. bowringiana* but smaller in total dimension and no swollen base of pseudo-bulb. Some have purple mark in lip. Culture: as for Cattleyas.

(4) *Chysis bractescens*. Peru.

Requires a little more attention to its wants, if it is to flower. Swollen, fleshy, pseudo-bulbs in a cluster habit, individually as much as a foot in length and five or six leaves equally as long, that are broad and lance-like. The very fleshy wax white flowers are 5 to 9 flowered about 3 inches across individually, with a yellow central portion to the lip.

Culture: Place in shallow pans and baskets, compost as for Cattleyas. Pour the water on and give them lots of light during the growing period. At maturity of growths reduce light intensity, keep compost on dry side, slightly lower temperature but in humid atmosphere.

(5) *Cypripedium venustum*. North India.

Out of this huge family how could you pick a favourite. Well this one has about everything. Foliage is mottled and beautiful, with deep purple on the underside. Flower scape is 6 to 10 inches. Dorsal sepal is greenish with a little white, with purple stripes, petals have warts of purple and purple tipped and overlying green. Labellum is ochre-yellow colour, veined with green like marble and fused with purple. It has a perky style, too. It is not a very large flower. This has the richness of renaissance colour. Culture: as for any warm *Cypripedium*.

(6) *Dendrobium densiflorum*. India.

It seems a little out of order to speak to Australians about *Dendrobiums*, but here is what I like. Although I love fifty others almost

as much. Pseudo-bulbs 12 to 15 inches high, stout, clavate, four-sided. Leaves branched from top of pseudo-bulbs and remain on the plant. Flowers are densely set in pendulous trusses, 6 to 9 inches long, individual flowers as much as 2 inches across, orange yellow, the lip darker and with a downy surface. This is characteristic of some other *Dendrobes* in habit, but something not too common to orchids as a class. Incidentally, the first orchid this family ever owned.

(7) *Dendrobium jamesianum*. Moulmein.

One of the hirsute group of *Dendrobes*, smaller than *D. infundibulum*. Pure white flowers 4 inches across, red stain in lip, 2 to 4 in an apical group. Flowers look fragile but last a long time on the plant.

(8) *Dendrobium superbum*. Philippines.

Fairly large pendant stems, three feet average, flowers singly or paired at nodes. Sepals and petals magenta rose, handsome, 3 to 4 inches across.

(9) *Ionopsis utricularioides*. Central America.

Small growing, small pseudo-bulbs, foliage 4 to 6 inches, flowers in beautiful panicles 15 inch average. Flowers many half to three-quarter inch white with a little purple flush. Gives handsome overall effect.

Culture: Hang near glass—it grows better on a raft or slab of tree fern.

(10) *Laelia lundii* v. *Regnellii*. Brazil.

Small growing species. Flowers come singly from young growths, about $1\frac{1}{4}$ to $1\frac{1}{2}$ inches across. White with lavender coloured lip. Looks like a perky small Cattleya.

Culture: Light position, intermediate temperature.

(11) *Maxillaria sanderiana*. Ecuador.

Short rhizomes, clustering pseudo-bulbs, height as much as a foot, scapes semi-erect, flowers 5 inches across, sepals and smaller petals white, thickly marked with dark red on basal halves, lip fleshy, ivory white, side lobe is stained bright red, yellow in centre.

Culture: Tree fern mounting, moist, avoid strong sun in summer. Choose coolish well ventilated position.

(12) *Miltonia spectabilis* var. *Moreliana*. Brazil.

Plant height no more than 12 inches, flowers fairly large, 5 inches in greatest dimension, beautiful deep, rich, purple colour, lip veined with rose. Flowers last a long time on the plant.

Culture: Cool end of intermediate house, not too strong sun, keep moist. Potting mixture, garden peat, dried sphagnum and fir bark in equal portions.

(13) *Oncidium sarcodes*. Brazil.

Plant medium size in scale, pseudo-bulbs 4 to 6 ins. Leaves 6 to 8 inches, a huge scape as much as 7 feet long, with short branches of many large flowers $1\frac{1}{2}$ to 2 inches. Sepals and petals chestnut brown, bordered with yellow, lip bright yellow, chestnut spotted near crest. Altogether a wonderful producer for the size of the plant.

Culture: Intermediate temperature, Osmunda fibre for compost. Plenty of moisture during growing season, but reduced consider-

ably at maturity, but not shrivelled.

(14) *Ascocentrum miniatum*. Java.

Known by many as *Saccolabium miniatum*. Vandaceous habit, miniature, 6 to 8 inches high flower stem, 3 to 4 inches, scape clustered, bright orange red, individual florets three-quarters inch. Very showy and easy to flower.

Culture: Hang near glass, intermediate to warm temperature. Loose compost as for Vandas. Plenty of moisture during growing, reduced somewhat at maturity.

(To be continued next issue)

Position is Everything

H. G. BURLEY

• Vandas and other warm orchids can be grown in Sydney provided they are kept on the dry side during the cold months of winter and are in one of the more favoured positions of this area.

Imagine a semi-circle with a centre at the General Post Office, starting from roughly Palm Beach through the North Shore—Northern Suburbs—Hills District—Parramatta—Bankstown and returning to the coast at roughly Cronulla. Around and inside this semi-circle 90 per cent. of the orchids are grown, but let us look at the difference in climate.

Along the coast we have really tropical bands of climate, usually denoted in the early days by belts of palms running into the hills. These have a maximum temperature of approximately 95 degrees on the hottest day and a minimum of 45 degrees. Humidity is of a high degree due to continual north-east maritime winds. In these areas all types of orchids can be grown by using a bush house and a cold glass house for their culture.

Compare the above conditions to those found in the Hills Districts and Western Suburbs. Anything up to 115 degrees in summer and down to 32 degrees every time a frost is on the ground. Humidity can fall to 15 per cent when a strong dry north-west wind is blowing in summer. Cymbidiums and some of the colder growing orchids are the only ones that will grow without heat in the winter.

Between these two extremes we have what is usually meant by "the climate of Sydney."

Now if you are content to limit your ambitions to Cymbidiums and cool orchids, a bush house with a glass shelter will be sufficient for your needs, but if you aspire to grow miscel-

laneous orchids you will have to instal a heated glass house unless you can find one of the many of these warmer north-east oases which are sprinkled around the seaside suburbs and around the harbour.

I have successfully cultivated Vandas, Miltonias and Cattleyas in a cool house at Avalon which houses Phalaenopsis. It also flowers Cymbidiums in the spring and grows Dendrobiums in the spring and summer.

I find, however, that Vandas hibernate between May and October—by hibernate I mean that they flower but do not grow to any extent compared to the normal growth of summer months. This, however, I have also noted in heated glass houses and put the phenomenon down to the fact that there are less sunlight hours in winter than in summer, rather than to the drop in temperature.

Miltonias I have found do not flourish in temperatures up to 120 degrees in the glasshouse in summer and will flower there in the winter, but so far I have flowered most of them in a small heated glass house at Eastwood with a minimum temperature of 65 degrees.

Therefore I would suggest that you limit your collection to cool types if your position is a cool one, or find a warm spot and instal a glasshouse for variety.

In other words "Position" is everything.

—H. G. Burley.

WORTH NOTING

• Most insecticides are more efficaceous at temperatures of 70 deg. F. and over. This is particularly true of sprays for mites.

—*Orchid Digest*, July, P. 316.

Cymbidiums and Colour

J. N. RENTOUL

• Going back a little in time, the Editor published an article under my name . . . mostly about the same subject as this will be. If readers are a little "browned off" on my articles they don't need to go any further than this paragraph. If they are a little critical they can look up the previous article and perhaps find that I am in conflict with myself. If they just like reading about orchids they can carry on and perhaps get a few ideas of their own by the time they have finished with mine.

Most of us who grow Cymbidiums seek some elusive thing like the perfect shape or the perfect colour, particularly a pink or red. If we go so far into it that the search becomes a fixed idea, our complete range of plants is turned over at least once every ten years. And if we study the matter as it needs to be studied we find that certain basic things merge. The first of them is that it is necessary to understand the make-up of our plants—whether they are diploids, triploids or tetraploids. It is not necessary to understand the complete technicalities, but it is necessary to know what group our plants belong to. For those who do not know, quite a lot can be found out from their breeding; enough in most cases to label them at least 90 per cent correctly.

As the years roll by Cymbidium breeding and flowering supply enough data to know that diploids can seldom compete with triploids in one thing that seems to have assumed almost overbearing importance—size. While we would prefer to have size allied to colour, it is only now becoming apparent that we can do so if we follow one rule—we must first breed the colour into diploids so that it almost becomes indelible. A cross then into a tetraploid line will see the seedlings emerge in great numbers in pastel shades when red is used, with some minor proportion being pale and another minor proportion dark. *But the best of the flowers will most probably be the "in-betweens"* and not the reds as we want to happen.

We will not introduce too many other factors to confuse, but just leave it at that.

When we breed diploids for colour it is surprising that there are so few plants we can use to give us size in the flowers. Even at that, the substance of the flower is seldom that of a tetraploid. But if it is colour that we want we

must begin to study bloodlines and keep fairly close to them. That means that there are at least two ideas that can be followed and, in following them, be prepared for the overwhelming proportion of the seedlings striving to throw back to a stable smaller flower of indiscriminate colour. It always seems to be a matter of breeding up to a certain standard that cannot be superseded . . . all we can do is elaborate on that standard for a time and then look for another avenue to supersede it. That at least seems to have been the trend over the last 30 years.

Doubtless there are many who will read this who purchased crosses of Ceres 'F. J. Hanbury', Profusion 'Violacea' and other brightly coloured Cymbidiums, both English and Australian productions, and were bitterly disappointed in their flowering. I can claim to have had the doubtful distinction of throwing away many myself. But we all know the bright Carisbrooks in their beautiful range of colour from bronze and pink to red and the deep brown-maroon of 'Florence'. It was only in following back the bloodline and analysing the parents that one important item was found. One of the parents of the Carisbrooks seems to have been Ralph Sander 'Aurora' — of all things, a green Cymbidium. Well, let us say preponderantly green, for it had a suffusion that earned it the varietal name 'Aurora'. This seemed either the carrier or the prime factor in accentuating colour on the Carisbrooks. When we look at the parentage of Ralph Sander we find perhaps the best bloodline for colour it would be possible to get—Pauwelsii x Cooperi. Pauwelsii is well known for its influence in the colour field and is again to assume just the same dominant role in the newer crosses from Nam Khan that we will see in the coming years. Cooperi is an unknown of good colour, but almost certainly a primary hybrid if not a species.

Ceres is the other parent of Carisbrook and carries more *lowianum* shape than that of *insigne*. But the problem of Ceres is that the colour and brilliance do not carry forward—not past Carisbrook in most cases. We are not so concerned in the successful carry-forward as in the question of what is the colour carrier—the pink or the green? We know quite well

the poor results from a colour-to-colour cross in most cases and that prompted the question of what actually carried colour.

A cross made probably by the late Richard Dart and given life by the late Andrew Persson was *lowianum* x Carisbrook. To my mind that was the right line, but turned out in the majority of cases as hopeless. Perhaps the reverse would have been superb. However, the same ardent orchid hybridiser and raiser produced another cross which appaled very much to the theory of *lowianum* colour linkage. It is to be regretted that we do not know what was in Richard Dart's mind when he made the cross Veronique 'Bullfinch' by Carisbrook 'Florence', but it satisfied me to the extent that I bought 20 of them and farmed two-thirds of them out to friends to grow and flower. Of the 20, only two were provocative. Lucifer Ruby was a red of brilliance and just fair shape; Lucifer 'Picardy' was a green-bronze, large and very heavy substance. I must confess that the latter was completely unexpected but had to occur when the bloodline was considered. Others were in varying shades from chocolate to deep red, but most of them execrable shape. I still have the reddest and darkest of them and shudder every time I think of form.

The green colour carrier theory demanded that Lucifer 'Picardy' be used. It was backcrossed into the Carisbrooks in Carisbrook No. 27, which commended itself for shape and colour, even if it was a bit hooded. A check cross of colour to colour was made with Lucifer 'Ruby' x Susan, both with good colour lines.

The bronze-green Lucifer did produce some very dark reds as expected in the limited number kept. Lucifer has extraordinary plant vigour in the variety 'Picardy' and this was well carried forward in the seedlings. Hundreds were destroyed because of space restriction and they were all very strong. Every flower in those so far seen was different, with some having the brown of Carisbrook 'Florence' allied with the green-bronze of Lucifer. As a cross it was disappointing because the number to flower is small and they do not seem to prove anything that Mendel did not foresee.

The red cross is equally disappointing because the red of Lucifer 'Ruby' was not qualified by the shape of Susan. Generally the flowers are smaller and some of the flowering plants indescribably poor in the plant form and the flowers.

It is all very well to say at this stage that some fine coloured Cymbidiums are showing

up in Australia and somebody must have known something. Let us go back five or six years when Australian crosses were being made that are flowering now and examine the likelihood of present-day parents being available to Australians. The seedlings from Remus and Mayfair and Profita and others are here now—so are the parents. But the likelihood is that we are still some five or six years behind for all we may be congratulating ourselves. That, of course, is true of diploids more than tetraploids, of which we now have a super-abundance in Nam Khan and other Balkis seedlings. It is still the better diploids that are lacking and *we must breed our own until we get what we want*. That alone justifies any diploid cross aimed at production of vivid coloured Cymbidiums; it also justifies any theory, however foolish it now looks, that green is a colour carrier. It is all very well to produce an array of triploids both shapely and colourful, but the continuance of the Cymbidium line can rely on neither the tetraploid nor the triploid, and though we may see one day the tetraploid with the colour of the diploid it is yet over the horizon so far as we in Australia are concerned.

Constitution is one of the amazing variations in Cymbidiums—perhaps in all hybrid orchids. It is this variation that is often a misleading thing and causes us to push aside unflowered plants as unlikely. We look with favour on a strong constitution because it means easier propagation and the psychological aspect that perhaps those strong broad leaves and big bulbs mean flowers in the same pattern. We all know that one is not necessarily the prerequisite for the other. That was well brought home in the crosses from Lucifer 'Picardy'.

It was not always the best and strongest plant that produced the best flowers, but the only green-cross flower worth keeping to date was the first that came out. It seemed to set a good pattern because it was from a plant of only moderate appearance. The strongest plant to flower so far had a small claw-shaped flower, green-yellow ground striped with dark brown lines. None of the red-check cross so far escaped the cull.

One thing confirmed in all groups of the same cross flowered is that the one worth looking at over and over again as the years go by is in the smallest minority. What is the fixative for colour? Is it the green carrier? Is it the combination of bloodlines in a tetraploid group as yet unknown to us? I started out in a way that seemed to infer that I knew all the an-

swers. Humbly I ask the question. Does anyone know? Certain things are apparent but the vital factors elude me. I would like to know, not because I wish to say "It's mine," but because I would like to enjoy it—that elusive, shapely red *Cymbidium*.

—43 Denman Ave., Glen Iris, Vic.

CONGRATULATIONS—from The Siam Society of Plant Culture

K. D. Lamont, Esq.,
Secretary, Orchid Society of N.S.W.,
42 Lawley Crescent,
Pymble, New South Wales,
AUSTRALIA.

Bangkok.
15th September, 1960.

Dear Sir,

We have the most pleasure to inform you that your entry in our 1960 International Orchid and Botanical Show on September 10-12 has won the Second Prize Award among the foreign Nursery Exhibits.

Your packing of the entry shipment was excellent, which was more or less a help to the winning.

Together with this letter an enclosure of the photograph of your display is being made for your study and appreciation.

The Siam Society of Plant Culture (under Royal Patronage) wishes to extend its gratitude to your very kind co-operation rendered so far and looks forward to receive such an appreciative assistance from you again next year.

An Award Trophy of your entry will be forwarded to you as soon as the engraving is being completed.

Congratulations,

Very truly yours,

For the Siam Society of Plant Culture,
Chalor Thongsuphan,

Hon. Secretary.

[This exhibit was sent from the Orchid Society of N.S.W. at the request of the committee, as a non-competitive exhibit. The entry in competition was decided by the Siam Society.

Our thanks to Messrs. L. Sasso and Captain H. Mills, who organised it, and also to Dr. A. Badham, Messrs. H. Crutch, F. Slattery, W. Smoothey, H. French and Sir John Hall-Best, who, with the abovementioned, supplied the flowers.—Ed.]

HISTORY OF ORCHIDS IN WEST AUSTRALIA

About 1938 a small coterie of garden enthusiasts used to meet in a tea room in the Central Arcade to discuss orchids. The late Mr. E. Ewens created much local interest with his Orchid Notes in one of our local publications, and he was largely instrumental in the formation of an Orchid Society not long afterwards, with about 20 members. The main collections were *Cypripedium* species, varieties and a few early hybrids. The *Australian Orchid Review* was taken by a number of members and parcels of orchids were imported from the eastern States, England and India.

With continually increasing membership the Society became an Incorporated Body and about 15 years ago the first public shows were staged.

Interest in Orchids has greatly increased here and there are now about 190 financial members. Two Exhibitions are held annually and the entries and number of sections are steadily expanding.

Most of the earliest members still survive and are actively supporting the Society to-day. Two have been created Life Members.

Last year it was decided that a Panel of Judges should be formed, with the ultimate view of making awards for outstanding blooms to comply with world standards. The W.A. Society is much indebted to Mr. W. Smoothey, also Messrs. M. McArthur and K. Lamont, of the N.S.W. and Victorian Orchid Societies, for their kind assistance and documentary samples supplied. The panel was recently appointed and will function largely under the same conditions as our eastern States associates.

An early visit from Mr. Frank Slattery is anticipated and members are keenly looking forward to seeing him; getting some help with judging problems and learning of his experiences at the recent World Conference in London.

Following a cool summer, a cold autumn and winter, many members are watching with hopeful interest the development of more flowering spikes than have been seen before. A number are experimenting with the controversial "Rotted Wood Compost", and the next 12 months should disclose some very interesting results.

Orchids With Terete Leaves

G. HERMON SLADE

• Cylindrical or "terete" leaves are not common in nature, yet many of the pines have needle-like leaves, while Spanish broom and our She Oaks, *Casuarina spp.*, have discarded their normal leaves to rely on their cylindrical stems called "phyllodes" which act as leaves, while possessing the cylindrical design which reduces area for evaporation of water to a minimum.

However, in the orchid family, terete leaves are found in many genera. Here in Australia we have some fine examples in the genus *Dendrobium*. *D. teretifolium*, called the "Rat tail" orchid because of its terete habit, is extraordinarily distinct from the "normal" dendrobe such as *D. nobile*.

From a rootstock high up in a tree hangs a mass of stems and leaves forming a pendulous plant several yards in length, the roots, stems and leaves are all terete. When the wire-like plant is in flower it is rather charming, for the hanging mass becomes covered in white spidery blossoms.

D. beckerii also has terete leaves but grows upwards, while *D. striolatum*, another terete leaf plant, covers rocks on steep mountain sides with numerous pendulous four-inch leaves. Grown on treefern blocks all these will readily respond to cultivation, to produce a mass of leaves far more dense than found in nature, with the peculiar, almost bizarre attraction of terete leaved orchids.

It is noteworthy that where there are flat-leaved and terete-leaved species within the one genus there is a good chance that the less vegetatively attractive terete-leaved ones will possess the more attractive flowers. *Vanda teres*, for example, looks like a vegetable imitation of wire netting with its terete leaves, stems and roots, yet its flowers are among the most colourful, shapely and attractive of all Vandas.

Vanda hookeriana is of similar habit with the stems, leaves and roots all cylindrical, yet this species has the largest lip of all Vandas, the flower being of attractive shape and delicately colourful, despite the untidy habit of the plant.

In the related genus *Aerides*, flat leaves, such as those of *Aerides odoratum* are usual; yet some species have developed cylindrical leaves. *Aerides vandarum* looks like a flexuose *Vanda teres* for it, too, has wiry leaves, roots and stems. It grows easily outdoors in Sydney

sprawling up a host tree; in spring the sizeable flowers, for it has the largest flowers of all the *Aerides*, make it a pretty sight. It is well worthwhile.

Aerides cylindricum and *A. mitratum* also have cylindrical leaves but do not seem to be known in Australian collections. They are apparently quite attractive.

The genus *Angraecum* has a terete leaved member, *A. scottianum*; this pendulous epiphyte with cylindrical leaves and stems looks abundantly distinct from the better known *A. sesquipedale* and *A. eberneum*; it produces attractive white lipped inverted flowers which make the plant quite charming, particularly as the beholder looks at it when hanging from its host tree.

In the genus *Oncidium*, the flat leaf forms such as *O. varicosum* and the donkey-eared types such as *O. luridum* are the best known; however, several terete species exist. *O. jamesianum* from Uruguay has round, pencil-like leaves, often growing erect, although sometimes they are pendulous. The flowers are among the loveliest of all *Oncidium*s, the wavy shapely white lip with golden crest contrasting beautifully with the purple-spotted lime-green sepals and petals.

O. cebolleta is one of the most widespread of all *Oncidium*s. It grows from Mexico to Brazil and Peru in semi-arid areas. It is much more attractive than would appear from some descriptions of the plant, to which the words "coarse" and "ungainly" have been applied. Having read such a description, I felt an apology was due to the plant when it produced a distinctive and colourful inflorescence of pretty yellow flowers. It would probably succeed on a host tree without attention, for it requires but little water thanks to its fleshy cylindrical leaves. *O. stipitatum* has pendulous leaves about two feet long. It produces an attractive inflorescence of yellow flowers. The "ballet girl" resemblance of many *Oncidium*s is particularly applicable to this species. It is indigenous to Panama.

A few genera consist of exclusively terete leaved species. All species of the genus *Luisia* are terete; they are found from Japan to Samoa but have unattractive flowers so are scarcely cultivated. One species, *L. teretifolia*, is indigenous to Queensland.

The species comprising the genus *Scuticaria*, *S. steelii* and *S. hadwenii* have terete leaves. *S. steelii* has the most elongated of all orchid leaves, they are nearly three feet in strong specimens and hang rope-like from the central root stock. The shapely conspicuous flowers of the *Scuticaria* spring from the "base", in this case the uppermost portion of the plant, making the *S. steelii* an attractive and distinct orchid whether in bloom or not.

S. hadwenii grows easily outdoors in Sydney. It is like a half-size *S. steelii* and is likewise decidedly attractive and unusual.

The genus *Brassavola* is composed of mostly terete-leaved species. Only *Brassavola glauca* and *B. digbyana* have flat *Cattleya*-like leaves, the other species, such as *B. cucullata*, *B. nodosa* and *B. perrinii*, have cylindrical leaves supported by wiry cylindrical stems. From the joint of the stem to the leaf, spring large white starlike flowers which are highly perfumed at night. The *Brassavolas* do well outside when acclimatised; they make a beautiful display on a late summer's night, enriching the garden with a delicious perfume.

Terete-leaved plants, including orchids, can hardly be considered nature's masterpieces in beauty of vegetative shape and form; yet from these sometimes ungainly plants spring many of our loveliest flowers. When in bloom an awkward looking plant can be marvellously transformed into an object of rare beauty.

Most terete plants are adapted to dry conditions and therefore need care when they are cultivated with orchids which inhabit the tropical rain forests. They should occupy a position set aside to receive less regular watering than usual. As our own climate has similar rainfall to that which many of them inhabit, most of them will grow outdoors without the need for artificial watering. They are, therefore, among the easiest orchids to cultivate in Eastern Australia.

There are orchids, *Polyrrhiza spp.*, which consist of terete roots only, without any leaves at all. However, these extraordinary plants will be the subject of a future article.

—5 Oyama Ave., Manly, N.S.W.

EXPORTS OF ORCHIDS FROM AUSTRALIA

Statistical Items Nos. 16431 and 16432

NOTE: Up to June, 1960 orchids were not separated statistically from other exported flowers and came under the heading of:—

Commercial Cut Flowers, Export and Potted Plants including Orchids

Year (ended June)	Value Aust. £ F.O.B.	Exported to
1957-58	£ 4,161	British Commonwealth
	£31,187	U.S.A.
	£ 264	Other countries
	<hr/> TOTAL £35,594 <hr/>	
Of this total £34,424 were from N.S.W.		
1958-59	£ 7,097	
	£33,340	British Commonwealth
	£ 122	U.S.A.
		Other countries
	<hr/> TOTAL £40,559 <hr/>	
Of this total £40,271 were from N.S.W.		
1959-60	£ 8,160	
	£24,415	British Commonwealth
	£ 1,391	U.S.A.
		Other countries
	<hr/> TOTAL £33,966 <hr/>	

Of this total £33,800 were from N.S.W.

Orchids on the Barrington

NOEL C. JUPP

• Living in the foothills of the Barrington Tops I have had many opportunities to visit the area in company with my brother Bill and Mr. York Meredith and party. The Barrington Tops area consists of steep, heavily timbered ridges and hills rising to an extensive plateau and is actually an extension of the Mount Royal Range. Carey's Peak (elevation 5,360 feet) is the highest point in the area. Snowfalls are frequent in winter and occasionally falls down as far as 3,000 feet occur. So far the area I have explored is confined to the Allyn River watershed. The late Rev. Rupp described Barrington Tops and foothills as one of the finest homes of native orchids he knew. Besides orchids some magnificent examples of both epiphytic and terrestrial ferns and trees are to be seen.

The lower foothills of the Tops consist mainly of undulating cleared ridges rising to fairly steep mountains. The isolated pockets of near virgin scrub in the numerous gullies provide a safe haven for many orchids with some found in the most unexpected places. *Dendrobium speciosum* is fairly plentiful, growing in leaf mould in the rock pockets or on many varieties of trees, quite often the Moreton Bay Fig. *Dendrobium gracilicaule* is fairly common in moist places within the scrubs. However, the hybrid of the above two, *Dendrobium gracillimum*, is considerably shyer and very seldom seen; I have only positively identified two plants. The tongue orchid *Dendrobium linguiforme* is found creeping on rocks and frequently on the Casuarinas along the creeks. *Dendrobium cucumerianum* has been found in only two isolated instances that I know of, but further searching may prove it to be more plentiful. *Dendrobium aemulum* occurs frequently on the iron barks in the area and is plentiful on the trees bordering the Gosford-Vacy Road. In spring the snowy white feathery trusses glimpsed from the car window can easily prove to be a driving hazard for the native enthusiast. The shorter stemmed variety is the usual variety met with, but occasionally the longer stemmed variety is seen. The so-called "pencil" and "Rat-tail" orchids are well represented; *D. beckeri* with its solitary yellowish flowers is frequently seen growing either in full sun or deep shade. However, plants found in conditions between the two extremes have sturdier

growth and produce more flowers. *Dendrobium teretifolium* occurs frequently on the Moreton Bay Figs and sometimes on the paper barked tit-tree. Some magnificent plants of this species can be seen and in early spring their snow-white blooms form a veritable mantle of white.

The genus *Sarcochilus* is also well represented, the commonest species to occur is *S. falcatus* and all its varying forms, the main one being var. *Montanus*. Patches of the dainty *S. olivaceus* are to be seen frequently; its light green and old gold flowers with their creamy and red marked lip make a very pretty picture. *S. hilli*, its long rambling roots, thin, deeply channelled leaves and delicately pink flowers opening one at a time are seen here and there. *S. spathulatus* is known to occur in this area but, strange to say, I have seen, only one plant of this species and that growing virtually at my back door on a pear tree. *Rhinerhiza divitiflora* also occurs in this area, but in no great quantity in any particular area. Sometimes the curious *Sarcanthus tridentatus* (the tangle orchid) is seen; one plant I know of being a veritable tangle of roots and stems, seemingly suspended in mid-air. Both the green and yellowish-brown flowered forms of *Cymbidium suave* are seen growing from a hollow tree trunk, a hollow limb or rotted stump, their roots penetrating deeply even yards into the decaying wood in the never ending search for food and moisture.

At the foot of the climb to the Barrington Tops Plateau the road runs side by side with the upper Allyn River and after passing the sawmill enters the rain forest proper. One of the first things the casual observer notes is the profusion of growth on the limbs and trunks of the Casuarinas, Ficus, Brachychiton and numerous varieties of small trees along the river. This growth consists mainly of orchids and ferns, the most predominant forms being *Dendrobium speciosum*, *beckeri*, *gracilicaule*, *teretifolium*. Giant specimens of *Davaillia paxidata* (hares-foot fern), *Asplenium nidus* and *Platynerium hilli* can be seen. On the lower growing trees, the quaint knobbly single-leaved pseudo-bulbs of *Bulbophyllum elisae* are seen, *B. exiguum* is plentiful and one which I have not as yet positively identified but believe to be *Liparis coelogynoides*. *Sarcochilus falcatus* is plentiful and both the thin textured and

leathery leaved forms of *S. olivaceus* are seen and every now and again *S. hilli* is seen, its miniature but perfectly formed flowers peeping from the moss. *Dendrobium beckerii* is extremely plentiful on the smaller trees and one morning out of curiosity I counted forty young plants growing on a tree about 10 feet high. *D. gracilicaule* is seen along the river and is plentiful further back in the scrub as is also the curious wheat-eared *Bulbophyllum shepherdii* and *Bulbophyllum exiguum*. *Dendrobium pugioniforme* is also seen in the scrub and on my last trip with Mr. York Meredith we found two specimens of *D. tenuissimum*. *S. falcatus*, *Cymbidium suave* and *Dendrobium gracilicaule* can be found on the trees bordering the track to Carey's Peak, but *D. gracilicaule* gradually disappears as the higher elevations are reached. *S. falcatus* and *C. suave* are to be found practically to the snowline, in fact, snow has been known to fall well down the mountain and on very cold days ice can be seen on the track in the middle of the day.

We have also paid some attention to the area known as Bald Knob. This is, of course, the southernmost limit of the lovely *Dendrobium falcorostum*. The track to this area involved climbing to a minor Mt. Everest (at least, that is what it felt like), but was otherwise good going except for numerous detours around head-high clumps of stinging nettles.

Numerous forays down the gullies provided some surprises, including some outstanding plants of *S. falcatus*, easily the largest we had seen, and a plant of what appeared to be *Todea barbara* (a Tree Fern) the first one we had seen in this area. Specimens of *Cyathea australis* and *Dicksonia antarctica* were seen along the track, some easily measuring eighteen inches in diameter. Large plants of *Cymbidium suave* in full flower were seen here and there along the track, one of them being really a picture.

So far as finding *D. falcorostum* was concerned we had little success, but found what had been a very large clump all but dead from lack of light and excess moisture. It and the limb it was growing on had apparently blown down during a past storm. Nearby we found the largest clump of *S. falcatus* we had ever seen. It had twenty separate growths which were so entwined it was hard to tell whether they originally came from the same rhizome or were separate plants. In any case, it would be a magnificent sight when in flower. Further efforts to find *D. falcorostum* were unsuccessful. The *Negrohead Beech* (*Nothofagus*)

(Continued on page 190)

EPIDENDRUM GOODALE MOIR

• This is an unusual *Epidendrum*, indeed almost a unique orchid, for its flowers are of attractive but unexpected colour, texture and shape. It has no pseudo-bulbs and its stems are covered with tiny warts.

The back of the sepals and petals are lilac, thus being quite different from the front of the flower, the colours of which can be seen in the block.

Its parents are *Epidendrum wallisii* from Columbia and *Epidendrum schummanianum* from Panama. Both species grow several feet tall, so the hybrids should be robust and very free flowering, judging by this plant having bloomed when only six inches tall.

Goodale Moir is a keen hybridist and orchid lover; the name for his attractive and unique hybrid is meant as a compliment to his originality as a hybridiser and to the sincere friendship of May and Goodale to many an orchid grower, including myself.

—G. H. Slade.

DENDROBIUM WINIFRED FORTESCUE VAR. WONDABAH

• The plant was imported some years ago from an English friend in the form of three pseudo-bulbs, unfortunately the primary eyes were dead on all three bulbs. Immediately it was dissected into three separate bulbs, all of which were placed and completely immersed in a large jar of water. In due course two aerial growths appeared and were left in the water till the growths were about two inches high and root action had commenced. On removal from the water the pseudo-bulb was severed about 2 inches below the aerial growth and potted into tree fern fibre, where they developed and carried on the same as a normal aerial growth, and I now have two very nice plants of a beautiful *Dendrobium*.

I might add this technique is applicable to hardwood type *Dendrobiums*, also *Cattleyas*.

—Leo Giles.

CYMBIDIUM 'ETTA BARLOW, DOVER HEIGHTS'

• Purchased by its owner as a seedling in 1957 in a 3in. pot with leaves 15in. high. The growth is very vigorous, having in the meantime been divided into two plants.

It has been grown under glass all the year round and at this, the first flowering, carried 10 blooms. The leading bulb is also sending up two new leads.

Grand Champion, Sydney and Mollie and Orland Festival, September, 1920



BABYLON CASTLE HILL x ROSALITA 'DOS PUEBLOS'
var. 'BURGUNDY' H.C.C.

Award No. 426. 29/5/60. Dos Pueblos Orchid Co.

The photograph gives a true indication of the crossing of these two wonderful parents, most of the offspring showing the large lip of Babylon Castle Hill and the beautiful pink tonings derived from Rosalita "dos pueblos."

Right:



Left:

LYCASTE SUNRISE x BALLIAE
'GREYCLIFFE' H.C.C.

J. Arnold. 13/9/60. Award No. 428.
For description see page 183.

Right:

CYM. ANITA 'DIANE', A.M.

D. Lanceley, 13/9/60. Award No. 429.
For description see page 190.





EPIDENDRUM GOODALE MOIR

Blocks and photograph by courtesy G. Hermon Slade.



DEN. WINIFRED FORTESQUE
'WONDABAH', A.M.

L. Giles, 29/8/60. Award No. 425. For description see page 178.



CYM. ETTA BARLOW 'DOVER HEIGHTS'

Award A.M. 18/10/60. Owner: Capt. Anderson. Size 4 2-10". White, with labellum spotted with orchid pink and having a suffused overlay band of pink at its distal end.



SARCOCHILUS HARTMANII

A native of the gullies of the Dorrigo and McPherson Ranges. Grows on rocks in rather shady, protected conditions.
See page 187.



Left:

**ONCIDIUM
KRAMERIANUM**

Note the waxy deep brown sepals; all of which point upwards, and the bright brown petals marbled yellow, lip yellow edged with brown. See page 183.

Right:

**ONCIDIUM
PAPILIO**

All the sepals point upwards, they are only slight wavy and have yellow markings on a deep brown background; the petals are striped brown and yellow, the lip is pale yellow edged with brown. See page 183.



TWO DISTINGUISHED NEW LYCASTE HYBRIDS

• A feature of both the Chelsea Flower Show and of the Sydney Orchid Festival was the way in which the genus *Lycaste*—named after a beautiful Grecian goddess—caught the eye of many a flower lover for their distinctive beauty.

At Chelsea it was a series of *Angulocastes*, which is an intergeneric hybrid group between *Anguloa* and *Lycaste*, which caused more comment than any other type of orchid exhibited at the Flower Show.

To better understand the generic origin of these unusual hybrids, it is interesting to trace their origin from the two distinct but related genera, *Anguloa* and *Lycaste*, which when crossed are designated *Angulocaste*.

The *Anguloas* are a genus of orchids with large strong *Lycaste*-like leaves with rather stiff, very fleshy tulip-like flowers. *Anguloas* are highly interesting and easily cultivated, they are bold and bizarre but they are scarcely graceful. Only three species of *Anguloa* are known in cultivation and even these are rarely seen.

Through crossing an *Anguloa* with a *Lycaste* the resultant hybrid inherited the strong fleshy floral character of the *Anguloa* with not quite enough of the open, shapely character of the *Lycaste* to yield an interesting but not a prize-winning hybrid.

By crossing the *Angulocaste* with *Lycaste* again, the second generation hybrid produced a fine, bold and shapely flower. It inherited enough of the colour, ease of growth and strong texture of the *Anguloa*, which, with the shape and symmetry of the *Lycaste*, resulted in a distinct, large, colourful and highly attractive plant. Such a hybrid of one-quarter *Anguloa* parentage was the praiseworthy *Angulocaste Olympus*.

This hybrid is very variable, for of the several exhibited at Chelsea all were distinct and each one beautiful. They were snapped up by visitors to the Third World Orchid Conference.

At the Sydney Orchid Festival, *Lycaste Sunrise* x *Balliae 'Greycliffe'* (see page 180) exhibited by M. J. Arnold, also attracted many admirers. This lovely *Lycaste* hybrid had pale green sepals which were marked by a reddish overlay as if they were sun-scorched. This illusion was quickly dispelled by the pure white petals and labellum, which in their purity al-

most said, "That tricked you!" The result was a second look and thus a double appreciation of the beauty of the unusual colour combination of the shapely symmetrical flower.

Let us hope more hybrid *Lycastes* are developed, for few orchids could be more appreciated or pleasing than these newcomers to the show benches.

—G. H. Slade.

ONCIDIUM KRAMERIANUM AND ONCIDIUM PAPILIO

• These two *Oncidiums* are well known but often confused, for while they are distinct from all other orchids and from other *Oncidiums*, their similarity requires a close examination to clearly realize their specific differences.

The dorsal sepals and two petals turn upwards in both species, giving the flowers an insect-like appearance. Hence their name "Butterfly Orchids."

The lower sepals are broad and showy, in *O. kramerianum* they are more wavy than those of *O. papilio*; they are differently marked as can be seen from the two illustrations on page 182. The scape of *O. kramerianum* is round, with rounded nodes; while in *O. papilio* the scape is flattened, so that by running the thumb and forefinger up the scape one can immediately "feel" one species from the other.

Both have leathery mottled leaves, those of *O. kramerianum* less spotted and somewhat smaller than *O. papilio*.

They grow well if affixed to a piece of tree-fern fibre and require tropical conditions, i.e., glasshouse protection in Sydney; whereas most other *Oncidiums* grow better in a bushhouse or outside in the open.

Both have been known since early days, *O. papilio* caught the eye of the Duke of Devonshire in 1823, which led to his interest in orchids, thus starting his famous collection and initiating an interest among other collectors which has become an absorbing interest of hobbyists throughout the world.

The two species have been hybridised to yield *O. Kalihi*, which was raised in Honolulu.

They are almost always in flower, one bloom appearing at a time over a period of years from the same inflorescence. Their unusual appearance is as arresting to flower lovers to-day as when viewed by the Duke of Devonshire 137 years ago.

—G. H. Slade.

An Organic Compost for Cymbidiums

W. POTTS

• I read with interest Mr. Schwartz's article in the September issue of the *Orchid Review* and as my name was mentioned in reference to the organic growing of seedlings I am forwarding this article which deals more fully with a compost which is receiving both praise and criticism, but steadily continues, by virtue of its exceptional results, to gain more converts.

In the course of any lectures to members of the various Societies, it is obvious that growers are becoming confused with variations of opinions on culture conveyed to them through articles and lectures. These few words may help the enthusiasts to assess the value of the mass of conflicting information, which in the interests of progressive growing we endeavour to assimilate.

My interests are primarily concerned with the genus *Cymbidium* with which this article deals. To understand *Cymbidiums* we must first know the environment in which the species we have used to produce the hybrids of to-day originated and prospered. It would take far more time than a few generations of "stewing" in Continental glasshouses to change their inherent requirements. Seedlings grown in and around Sydney have shown how quickly plants respond to environmental factors similar to the original parent species. A good compost will not answer the whole question of successful growth, but if all other physical factors have been considered will provide the balanced nutriment, without which, all other considerations are negated.

Cymbidiums are not tropical plants and must be treated as such. The species grow at altitude which is synonymous with air circulation—they receive warm and heavy monsoonal rains in summer, chill winds from the Himalayas in winter. Their sustenance comes from breaking down vegetable matter minutely, assisted by bird-wastes—they are not true terrestrials and if found at ground level grow in deep, well drained deposits of deteriorating wood, bark and leaves. In general, they grow under vegetative cover which breaks down summer sun intensity. These conditions, which vary from our Australian mid-summer climate, prevent intense leaf expiration, which is the major cause of leaf-burn in our hot dry periods.

From the above we can assess the physical factors necessary for healthy growth and free flowering. These are:—

(a) *Air*. Free air circulation, allowing dehydration of compost is essential to *Cymbidiums*. Stagnant air in sheltered conditions will sour the compost, retard root growth and encourage pathogenic bacteria and fungi. Pests are far more prevalent in still sheltered houses. Open plants to the air—the response will be immediate.

(b) *Sunlight*. *Cymbidiums* are sun lovers and need only light cover during our hot summer months. Evening watering of plants, floors and benches during this period will maintain humidity.

(c) *Watering*. Good drainage of pot is essential. Water only when necessary and give plants a good soaking. Limit plants in winter when evaporation is light. Maintain moisture but avoid constant wetness.

Given the above conditions, a compost rich in plant food can function effectively and produce strong free flowering plants resistant to most diseases and requiring little attention. Composts of today range from holding mediums of little, if any, food value, to processed organic wastes. With holding mediums, nutriment is supplied by the regular application of chemicals and stimulants. Organic composts are intended to contain all essential elements for growth. Most growers use varying quantities of both methods but, as a purely organic grower, my interest lies with the study of and experiments with plant and animal or bird wastes when composted and activated.

Nature in Her own pattern and in Her own good time, returns all waste matter back to the soil. In this process of return wastes are acted upon by bacteria and fungi to convert these useless products into plant foods, hormones and supply the resistance factors necessary to protect vegetative life against the many pests and diseases that seek to destroy it. Little is known scientifically of the complex theory of this process, but practical experience is proving the amazing results which can be obtained by using a properly prepared organic medium.

All orchids are germinated by and are assisted in their growth by fungi. The specific fungus present in the Cytoplasm of all mature *Cymbidium* root cells is of the *Rhizoctonia* genus.

The writer has successfully isolated this symbiont, but its contribution to the development of orchids is not as yet fully understood. Experimental work is in progress at the University of Sydney, using radio-active substances which are taken up by the developing fungus and can be traced through the orchid seed in the progress of germination and subsequent growth.

I have mentioned symbiosis because in the preparation of a growing medium, we must consider this close relationship between plant and fungus and endeavour to prepare a compost which will encourage both fungus and bacterial activity. Under natural conditions activity is slow, but can be accelerated by mixing vegetable and animal or bird wastes which, when combined in quantity, generate considerable heat. This heat is caused by vast colonies of bacteria and fungi in their work in converting waste to plant food. "Rotted sawdust", the words used by Mr. Schwartz in his article, is the antithesis of correct composting. Compost heaps must be open to air and sunlight and prepared on well-drained ground where water can escape. Excess moisture protected from sun and air cannot evaporate freely and the heap will become sour rotting muck full of pathogenic life and incapable of performing the function for which it was intended. Regular turning of the heap during long spells of wet weather will prevent the compost from becoming sour.

The above considerations are a *must* if results are to be obtained.

The sawdust compost recently published in the A.O.R. has shown growers what a properly prepared organic medium can do and the method of preparation originated by Mr. Dent, of Broadmeadow, does not vary from my own. Experience, however, has taught me that composted material alone, although rich in organic plant food, is a "dead city" incapable of further production because of the exhaustion of available raw materials. The open bed culture of terrestrial poppies on composted sawdust varies greatly from the pot culture of semi-epiphytic orchids and consideration must be given to adjusting the medium to the needs of the plant and to the change in environment in which orchids are grown. To retain the best features of natural activation and budget for the specific requirements of a potted *Cymbidium* the compost has been adjusted to eliminate the weaknesses in Mr. Dent's sawdust medium. These weaknesses are:—

(a) Fungal and bacterial action cease when available food for these colonies is exhausted.

No further food producing activity takes place unless raw materials are added.

(b) Because of intense activation the fibrous nature of the vegetable wastes has seriously deteriorated and subsequent collapse is rapid. Pots require frequent topping up due to shrinkage, and in periods of heavy rain the fine sawdust material can be reduced to mud. Repotting each year is necessary.

(c) Available plant food is being exhausted by the growing needs of the plant and by leaching and, with no means of replacing this loss, regular feeding programmes must later be introduced.

In view of the above shortcomings, I have endeavoured to cover the requirements of a good *Cymbidium* compost which must meet more than immediate growing needs.

These requirements are:—

(a) Rich plant food immediately available to the root system of plants on repotting. This will prevent growth check and pseudo-bulb dehydration.

(b) Continuation of fungal and bacterial action in potted compost to provide gradual release of plant food over a long period. This is obtained by adding raw material lightly activated to the composted material.

(c) Slow breakdown of compost components to retain openness of texture as medium ages, ensure constant drainage of excess moisture and obviates the necessity of annual repotting. Raw wood chips, peat moss and coarse sand, plus good aeration are invaluable aids in the prevention of rapid compost deterioration.

Cymbidiums will not do their best if they are disturbed each year and a good growing medium aided by supplementary organic feeding should hold its texture and provide nutriment for the plant for at least three years. At the moment I am flowering a number of my undisturbed seedlings which are each carrying from eight to twelve flower spikes.

One of the major considerations in plant culture is the time factor. Few growers have unlimited time to attend to their plants and are unable to cope with fortnightly feeding programmes and endless spraying for pest control. Providing *Cymbidiums* are given the proper growing conditions which have already been covered in this article, they will only require occasional organic feeding during the growing season, are resistant to most pests and will develop rapidly and flower with the minimum of attention. Organic growing is time saving growing and the following method of preparing compost will more than repay the effort.

Before giving quantities and method, some explanation of the ingredients is necessary.

Wood Chips and/or Sawdust

This material should be of Australian hardwood or oak and its age is immaterial. Chips or sawdust from imported timbers must NOT be used as all foreign timber entering the country is dipped for pest control. The chemicals used could be lethal to plant life.

Wood is rich in the organic elements essential for vegetative growth and forms the basic medium for the species from which our hybrids emanate. Soft woods are just as effective but tend to break down rapidly after activation. Activation means that wastes have gone through a composting process where heat has been generated by bacterial and fungal activity, cooling only when the material no longer provides nutriment for the vast colonies present in the heap.

If softwoods or fine sawdust is used an increase in the given quantity of coarse sand and peat moss is required.

Leaf Mould

This is not essential, but, as leaf mould is already in the process of breakdown, it assists in introducing the natural form of bacteria and fungi needed in the process of activation.

Poultry Manure

Birds have only one avenue of excretion where animals have two. Urea, a valuable source of organic nitrogen, is readily available in bird wastes. Dry, deep litter, free from dirt, is ideal.

Dolomite

All vegetable matter tends to increase in acidity as it deteriorates. Dolomite has some food value, but is used primarily as a buffer against high acidity.

Blood and Bone

An organic fertiliser so well known to all gardeners that it needs no comment.

Peat Moss

Light, fibrous and moisture retaining. Has little food value but is valuable in lightening the mixture and, because of its ability to withstand quick breakdown, keeps compost open and moist.

Coarse Sand

All vegetable matter when constantly wet, tends to fuse and become soggy and sour. Particles of coarse sand prevent this fusion and assist greatly in keeping the compost sweet and well drained.

Preparation of Compost

Small quantities of material cannot retain moisture or heat; it is necessary to use at least

six cornsacks of sawdust or wood chips, preferably eight or more.

Activated Material

- 8 Bags (cornsacks) wood chips
or
- 6 Bags wood chips
- 2 Bags leaf mould
- 2 Bags poultry manure (dry and sifted)
- $\frac{1}{2}$ Kerosene tin blood and bone
- $\frac{1}{4}$ Kerosene tin dolomite

Mix thoroughly when dry, heap, then wet. Allow to stand during heating process and when cool, turn mixture with shovel. Minor heating will again occur. The compost is then ready for use. Keep damp but not saturated.

When potting add to any quantity of the above mixture an equal quantity of raw wood chips, rub in peat moss (approximately one-quarter of total bulk, coarse sand, and dust with poultry manure and blood and bone. Mix thoroughly. Light re-activation will occur, resulting in warmth but not heat.

Care should be taken in crocking of pots, plants on re-potting should be examined for dead roots. These must be removed as decaying roots sour the medium. Active roots can be trimmed without harm to the plant, but care must be exercised in replacing plants in pots. Healthy roots will easily fracture and must not be jammed straight down—they should be laid in the pot and the plant turned until roots curve around the sides.

Compost should be firmed down by using thumb pressure around the edges. Make sure that the plant does not resemble "Grandma's tooth" when repotted. It should be sufficiently firm to resist pressure against the pseudo-bulbs.

All genera respond magnificently to this medium, but in the case of epiphytes, the fine material should be sifted, using the coarse residue.

Regarding plant feeding, every enthusiastic grower is looking for the elixir of plant life that will turn a small seedling into "Jack's Beanstalk" overnight. I am an organic grower not because I am prejudiced against inorganic stimulants, but because I have used them under control and have found that their effect is not sustained and plants, like ourselves, suffer from "hangovers". Concentrations of some chemical stimulants can cause the compost to become toxic, and quantities above those prescribed can cause burning of foliage and damage to propagable eyes. Heavy organic feeding can also cause compost deterioration and plant sickness.

My feeding programme commences at the end of August when plants have finished their winter rest period and are responding to the longer days and higher temperatures. Feeding is light (once monthly) throughout the growing season and the organic elements and quantities used as follows:—

- 1 Kerosene tin sifted poultry manure
- 4 Double handfuls blood and bone
or
- 2 Double handfuls blood and bone
- 4 Double handfuls bone flour
- 1 double handful dolomite

Dust around outside edge of pot, one handful to 10in. pot, less for smaller pots. After dusting, give plants a sood soaking.

This simple organic fertiliser will replace nutriment lost by leaching and contains all essentials for maintaining strong healthy growth.

In conclusion, I wish to emphasise that no grower can afford to be dogmatic in his approach to orchid culture. Progress is being made every day in the fields of genetic cytology, plant physiology and general culture. My methods are based on years of experience in the germination and development of immature seedlings as well as the culture of native plants. In immaturity young plants are far more susceptible to disease and to unsuitable physical factors than their elders and their responses teach us much.

This unsolicited article is therefore forwarded in the hope that inexperienced growers may derive some benefit and guidance in their approach to the most satisfying pastime I know.

—161 Old South Head Road,
Bondi Junction, N.S.W.

Sarcochilus of North Queensland

K. WADSWORTH, Millaa Millaa

• I have always been interested in the genus *Sarcochilus*, which is not surprising, seeing that I live in an area that is rich in this genus, particularly *Sarcochilus falcatus*.

This species occurs abundantly over a wide area of the Atherton and Evelyn Tablelands. There are two forms, one a rather small flowered type which blooms in autumn. The other is a much larger type in floral, as well as vegetative in form, and flowers in August. I have known flowers that measured 1½ in. across and very well shaped. The plant form of the latter type is exceedingly robust, with very stout stems and heavy and unusually rigid leaves. Its distribution is, however, confined to one small area of the East Evelyn Tableland. It is not unusual to see trees along creek banks, covered from top to bottom with this orchid, if the situation is favourable.

The North Queensland forms of *Sarcochilus falcatus* are by no means easy to grow, although I have considerable success with them, mainly due to the fact that I have unlimited material to experiment with. My usual method of cultivation is to plant them in baskets or blisters containing pieces of bark and moss. They grow in a very cool and damp bush house, with two inches of sawdust on the floor. I give them copious waterings, plus a weekly dose of Aqua-

sol. Under these conditions they flourish and flower prolifically; as many as twelve blooms per spike. In nature they seldom have more than nine flowers on a spike.

Sarcochilus ceciliae is a dainty and colourful miniature. Its growing place in nature is far removed from the lush surroundings that *Sarcochilus falcatus* prefers. *Sarcochilus ceciliae* thrives in the barren limestone ranges, under very harsh conditions. It often grows in full sunlight, but the best plants are found where a modicum of shade is offered. They favour high altitudes, in excess of 3,000 feet, where in winter the temperature often falls below freezing point. On the other hand, the summer temperature goes over the century. Little or no rain falls between May and November, but it takes a lot to dismay this orchid. A well grown plant of *Sarcochilus ceciliae* will produce flowers for several months of the year, during spring and summer. Years ago I found a large plant growing on a boulder about the size of a football. I laboriously carried it back to my car, a distance of five miles. I still have the plant and it blooms for six months of the year. The flowers of the North Queensland form of *Sarcochilus ceciliae* are usually pink or mauve, although I have one with white flowers.

It is comparatively easy to grow, and once established it requires little assistance. The

plants thrive on small pieces of tree fern, which allow ample aeration of the roots. For a small orchid, they have a large root mass. In nature they run for yards on rock faces, sometimes disappearing into crevices in search of food. I have often found this orchid growing among the roots and bulbs of *Dendrobium speciosum*; companions in adversity. On these dry limestone cliffs there is little vegetation growing, other than these two orchids.

There are two forms of *Sarcophilus olivaceus* to be found here, usually frequenting the banks of creeks. One type has green sepals and petals, the other has red. I find that they grow well tied to the branches of citrus trees. I would add here that I live at a fairly high elevation and most trees here are covered in native mosses. *Sarcophilus olivaceus* and *Sarcophilus falcatus*

are very partial to moss, so much so, that from my observations of these orchids, I would say that they appear to grow on the moss, rather than on the bark of the tree. They always seem to be very loosely attached to their host.

I have several fine specimens of *Sarcophilus fitzgeraldii* and *Sarcophilus hartmanii* growing here. They present no problem in cultivation. They grow easily and multiply rapidly and flower well. These plants were sent to me by friends in New South Wales and are treasures indeed.

—K. Wadsworth.

ORCHID FESTIVAL 1961

• Sydney Town Hall, 12th to 15th September, 1961.

The 1960 N.S.W. Festival

FRED JONES

• The Annual Orchid Festival, presented by the Orchid Society of N.S.W. Limited, was held at the Sydney Town Hall from the 13th to the 16th September, 1960. Due to the revision of the Schedule, with a view to making it easier for the smaller growers to exhibit, the Show Committee was gratified to note an increased number of entries. The Novice Sections, however, received very poor support.

This year the Society was fortunate in having Miss Anne Baxter as its guest of honour to open the Festival.

The District Exhibit Competition was won by The Eastwood and District Orchid Circle with an excellently arranged and finished display. The theme of this exhibit was a crumbling fort with various genera being effectively arranged on the different sides of the fort. The more prominent Cymbidiums noted were a fine Plover with five arching spikes, Fascination 'Dusky Beauty' and 'Regal', distinctive dark reddish brown flowers; Girraheen 'Gloria', a pastel green Stonechat 'Elouera'; Buddah 'Carlingford', an unusual shapely rounded flower, pink with a reddish lip; Songbird, deep golden yellow with a red lip; Anita 'Wadell', a distinct attractive flower with unusual colouring; Princess Astrid 'Dorothy', Swallows 'Daffodil', 'Hebe' and 'Magnolia', Sussex 'Laelia

Sasso', Sussex x Profita, a dark bronze flower, together with a greenish bronze Girraheen 'Cronulla' and a shapely pastel green Ispahan 'Mascot'. Amongst the Cattleyas, the following varieties were outstanding, Cliftonii 'Magnifica', two large mauve flowers; Bow Bells, a shapely white; Bow Bells x Mossiae, Lc. Gailard and a colourful Poncarrel.

As in previous years the display of Australian native orchids in this Society's exhibit was admired by all, the profusion and daintiness of the flowers being very appealing. The outstanding varieties noted included *Dendrobium kingianum*, in variety, *D. Kestevenii*, *D. falciforme*, *D. tetragonum* and *D. linguiforme*, with a specimen of *Pterostylis baptistii*, having eleven quaint greenish flowers showing to advantage. The hybrid Dendrobiums noted were Winifred Fortescue, A.M., several forms of Terence Read, the colourful Nolan and *nobile* varieties, which contrasted with the quaint long-lasting *D. macrophyllum* from New Guinea. Several *Lycaste skinnerii*, *Coelogyne cristata* and Phalaenopsis hybrids added further variety to the display, which was carefully embellished with Crotons, Ferns, Anthuriums and foliage plants.

The North Shore Orchid Society won Second Prize with an exhibit based on a theme of a bride entering the church, the various miscellaneous orchids being arranged in the fore-

ground with a profusion of quality Cymbidiums being banked on the other side of the church. Unfortunately, the bride seemed unreal, and obviously cost this fine display the two points which were necessary to have won the first prize.

The St. George Orchid Society was placed third with a fine arrangement of miscellaneous orchids in a rock grotto, the Cymbidiums being arranged on the outer edges and at the rear of the exhibit. The main (and recurring) weakness of this entry was the lack of miscellaneous varieties which are so necessary under the present system of judging.

The Western Suburbs Orchid Society had an interesting garden setting with a bush-house and rockery and clearly won the display, arrangement and ticketing section of the judging card. However, the lack of quality orchids rather caused the excellent exhibit to slump into fourth place.

The best display by an Affiliated Society saw Sydney Orchid Society defeat four other competitors with a fine, balanced and colourful display. Generous support by several of this Society's larger growers ensured the quality and quantity of the flowers. The more prominent Cymbidiums noted were Miranda 'Maisie', with five long arching spikes; Hubert Cambourn 'Lois', a fine bright pink; several plants of Dorchester 'Jeanette' and Balkis 'Luath'; a showy Golden Nubian; a pastel green Esmeralda contrasted with Cariga 'Farrar', a bright yellow with a red lip; Princess Astrid 'Dorothy', Girrahween 'Gloria', an attractive yellow green; a seedling California 'Vivienne', with four spikes of shapely creamy yellow red lipped flowers, together with Sussex 'Laelia Sasso' and Doris Aurea 'Alana'. The miscellaneous varieties included two showy and freely flowered Phalaenopses Barbara Kirch and Jane L. Kingsbury x Gilles Gratiot as a centre piece surrounded by various Dendrobiums. D. Nolan, the brightly coloured D. Terence Read 'East Hills', a deep yellow D. Montrose, also several Gatton Monarch and Merlin hybrids were outstanding. Amongst the Cypripediums were Rente, a large F. M. Ogilvie 'The King'; Mildred Hunter, a shapely spotted variety, and the quaint greenish Maudiae 'Magnificum'. Several Cattleyas including the yellow Lc. Goldcrest x Snowdon, together with Australian Native Dendrobiums, completed the display, which was finished with Alocasias, Crotons, Anthuriums and Ferns.

Qantas displayed some very striking and colourful flowers which had been flown from various overseas Orchid growing centres. The numerous Vandas included Diana 'Nam Kee', a large pure white flower; a bright reddish pink form of Nellie Morley 'Singapore', apricot tonings; *sanderiana*, and a pink Margaret Maron. Arachnis Maggie Oei, yellow and brown; together with a bright red Aranthera James Storie, a large red Lc. Marysville, the quaint *Cattleya amethystoglossa* and the showy Lc. Ethel Merman with various *Dendrobium phalaenopsis* hybrids, added to the spectacle.

The Dos Pueblos Orchid Company trade display took the form of a running creek and waterfall with the Cymbidiums massed on either side. The new varieties, both in shape and colour, aroused great interest and comment. The more outstanding plants included Rosarita 'Beauty', masses of soft pink flowers; Judy 'Perfection', a rounded pink flower with a striking lip; Rosarita 'Glory', a large bold reddish pink flower; San Francisco 'The Beat', a huge distinct flower, yellow with a red lip, granted a H.C.C.; Etta Barlow 'Sea Green', a rounded and shapely pastel green with a pinkish lip; Balkis x Flamingo, a shapely white with a reddish pink flushed lip, granted an H.C.C.; Sayonara 'Rhonda', a bold large yellow green with a red lip, Monica Hargreaves 'Blanche', a white flower, the white lip with yellow in the centre, Grace Mitchell 'Yellowstone', and Sunset', bold open flowers in the yellow tonings. Various Oncidiums including *O. tigrinum* and *O. concolor*, also *Lycaste cruenta* and several other small attractive orchids, together with Alocasias, Calatheas, Anthuriums and ferns embellished the display. Awarded a Gold Medal.

Mr. F. Slattery displayed a fine range of quality Cymbidiums and miscellaneous varieties. A new venture this year was a background of plaster panels painted in various pastel colours, the whole effect being complimentary to the orchids. The outstanding Cymbidiums were Baltic, A.M. (formerly Miretta 'Matchless'), five spikes of large open green flowers; Lady Moxham, a bold showy yellow flower; Balkis 'Luath', three spikes; Swallow 'Daffodil'; Regency 'Bexley', a dark red brown; Swallow 'Kingsford', a clear bright pink; Rio Rita 'Radiant', a bold reddish pink; Sussex Dawn 'Dorothy May', with three spikes of rounded green, red lipped flowers; and Aldis Lamp 'Arncliffe'. Several fine Dendrobiums included Sunburst 'Elizabeth Anne', the yellow Montrose and a showy Gatton Monarch, together

with various native varieties. Various Anthuriums, Cordylines, foliage plants and ferns effectively finished this group. Granted a Silver Medal.

Mr. J. Bisset, as in other years, arranged his trade display on the stage. A nicely painted backdrop served as a foil to the Cymbidiums and provided an excellent and eye-catching backdrop to the whole Festival as the visitors entered the hall. The more prominent varieties of the Cymbidiums shown were Balkis 'Luath', Swallow 'Soulangeana', two strong spikes; Nam Khan, an arching spike of bold pink flowers; Simla, a reddish pink; a bright red Judy; several varieties of Santa Fe were in the yellow bronze shades with a strong red lip; Jason 'Mablethorpe', a yellow green; Ispahan 'Mas-cot', three spikes of shapely green flowers; a white Princess Maria, together with the yellow Memoria Albertii and a pretty Stonechat 'Elouera'. Numerous *Ficus decora* and Doescherii, Cordylines, Calatheas and ferns embellished this large display.

The Delmonaco Orchid Nursery arranged a neat trade display which comprised the following Cymbidiums, President Wilson 'Lime Green', a huge bold pastel green flower; Swallow 'Hebe', a lovely Swallow 'Daffodil'; a large Flamingo 'Allambie'; Girrahween

(Continued from page 178)

Moorei) grows to a great height—easily one hundred feet—and prolonged observations of plants on the branches thereof can be very hard on the eyes and particularly hard on the neck. However, our searching was not in vain as we observed some magnificent examples of *D. pugioniforme* growing on the beech trees. Many of these were easily eight feet in length and twelve inches in diameter. Large plants of what appeared to be *D. teretifolium* were also seen. The only other native orchid we have seen of note in the area is *Galanthe veratrifolia*. Considerable clumps of this species can be found in the Massey's Creek area and isolated plants have been found in the Upper Albyn area. Other species which we have not as yet found in the above areas, but which should grow there, are *Rhinerhiza divitiflora*, *D. gracillimum*, *D. cucumerinum*, *Liparis reflexa* and possibly *D. kingianum* and other species of the genus *Bulbophyllum*. Each trip brings a surprise of species to add to our list and further excursions may find them all.

—Halton, via Paterson Ic., N.S.W.

'Zenzi', two huge arching spikes; Balkis 'Luath', Cygnus 'Opalescent', with a large spike of pastel green flowers; a bright pink Edzell 'Elizabeth', also Cassandra 'Jennifer' with two strong spikes. Several novelties included *Oncidium tigrinum*, yellow and brown; *Coelogyne massangeana*, and various *Dendrobium* hybrids. This exhibit was embellished with several Cordylines, Philodendrons, Anthuriums and ferns.

Owing to the large number of classes it is not possible to mention all the prize winners, the following notes being the writer's impressions of the First Prize Winning Exhibits:

Grand Champion Cymbidium—Dorchester 'Jeanette', Mr. S. G. Cooke. A large vigorous plant carried two spikes totalling fifteen large shapely rounded flowers. Petals and sepals white, the white lip having a reddish spotting and a yellow marking in the throat. Winner of the Armstrong and Brown (England) Trophy and the Harold Crutch Appreciation Prize.

Reserve Champion Cymbidium—Anita 'Diane', Mr. H. D. Lancely. A fine seedling (Nam Khan x Profita) with an arching spike of seventeen shapely, but somewhat hooded flowers. Petals and sepals white overlaid with a pinkish suffusion, the broad lip spotted and marked with red. This plant also won the sections for the Best Imported Seedling and Best Seedling for the 1960 Festival, which carried the Dos Pueblos Trophy. Subsequently, an Award of Merit was granted by the Society's Judges.

Best Red Cymbidium—Regency 'Bexley', Mr. F. Slattery. Two arching spikes totalling twenty-six showy flowers. Petals and sepals a deep red brown shade, the lip heavily marked with red.

Best Green Cymbidium—Esmeralda, Mr. A. Birdsall. A semi-pendulous spike of eighteen smallish flowers. Petals and sepals a clear green, the white lip marked with yellow.

Best Yellow Cymbidium—Auriga 'Merrilong', Mr. H. D. Lancely. A semi-arching spike of thirteen smallish brightly coloured flowers. Petals and sepals a clear yellow, the lip heavily marked with red.

Best Specimen Cymbidium—Swallow 'Hebe', Mr. S. G. Cooke. A magnificent display of a well grown and flowered plant which carried sixteen strong spikes and hundreds of flowers. Petals and sepals white flushed with pink, the lip heavily marked with red.

Best Specimen, Australian Native—*Dendrobium gracillimum*, Mr. J. Cronin. A lovely graceful specimen of this showy native carried dozens of spikes of small yellow green flowers.

Best Other Specimen—Phalaenopsis Barbara Kirch, Mr. F. Bassett. A lovely plant with a strong arching and branching spike with approximately one hundred large showy flowers. The petals and sepals white, the white lip having small red brown markings.

Orchids in their Homes—Mr. B. Schwartz. A trophy was donated by Mr. Hermon Slade for the best ecological exhibit, i.e., an orchid growing, as in nature, with other plants. A nicely grown and presented exhibit consisting of a freely flowered plant of *Dendrobium falcostrum* growing in the centre of a fine specimen of a stag-horn.

The H. R. Crutch Trophy—Mr. S. G. Cooke. This trophy, a silver tray, was won by Mr. Cooke who, with his dominance of the Cymbidium Section, had a very easy victory.

Group of Six Cymbidiums—Mr. S. G. Cooke. A wonderful display of quality flowers, well grown, presented and arranged, the colour variation leaving little to be desired. The following varieties comprised this magnificent group:—Dorchester 'Jeanette', five strong spikes of large rounded white flowers; Sussex 'Laelia Sasso', three spikes of bold flowers; Cygnus 'Opalescent', five spikes of large pastel green flowers; Firebird 'Jean', a bold reddish flower; Louis Sander 'Kirribilli', two spikes of large rounded pink flowers; and York 'Lady Slim', two spikes of yellow shapely flowers with a red lip.

Group of Three Cymbidiums—Mr. S. G. Cooke. A fine group comprising Dorchester 'Jeanette', with six large shapely flowers; Sussex 'Laelia Sasso', two spikes totalling twenty-one showy blooms; and Girahween 'Gloria', with a large arching spike of twenty-five rounded yellow green flowers.

Group of Two Cymbidiums—Mr. S. G. Cooke. Dorchester 'Jeanette', the Champion of the Show, and Balkis 'Luath', a semi-erect spike of twelve large rounded flowers. Petals and sepals white flushed with pink, the lip lightly spotted with red.

Best Coloured Cymbidium—

(a) Best Red Cymbidium—Carisbrook 'Waver-ton', Mr. A. Birdsall. A semi-arching spike of nine colourful flowers. Petals and sepals a dark reddish pink shade, the lip marked with red.

(b) Best Green—Esmeralda, Mr. A. Birdsall. An arching spike of eighteen attractively coloured flowers. Petals and sepals a clear green, the lip marked with yellow.

(c) Best Yellow—Cariga 'Sorrento', Mr. J. Burtal. A horizontal spike of twelve medium sized shapely flowers. Petals and sepals a clear yellow, the lip flushed and marked with orange red.

(d) Best White—Gottianum 'Beryl Jean', Mr. S. G. Cooke. An arching spike of ten large bold flowers. Petals and sepals a deep pink, the lip flushed and spotted with red.

(f) Best Bronze—Joyance 'Cinnamon', Mrs. Malone. An improving plant with three smallish spikes. Petals and sepals a deep bronze shade, the lip heavily marked with red.

Group of Four Decorative Cymbidiums—Mr. S. G. Cooke. A fine display of blended colours and attractive flowers, the group consisted of Esmeralda, two spikes of clear pastel green flowers; Jason 'Golden Beauty', a large arching spike of yellow blooms; Carisbrook 'Brick', a strong spike of bold dark reddish flowers; and Carisbrook 'Greenacres' with two arching spikes of clear green, red lipped flowers.

Best Cymbidium Exhibited by a Novice—Balkis 'Luath', Mr. D. Coldhill. A small spike of seven shapely flowers. Petals and sepals a clear white, the white lip lightly spotted with red and flushed with pink. Winner of the "Warra Warra" Cup.

Best Coloured Cymbidium exhibited by a Novice—Ispahan 'Mascot', Mr. C. Smith. A nicely grown plant with three spikes of shapely flowers. Petals and sepals a clear pastel green, the cream lip marked with red brown.

Best Cymbidium Seedling (Australian)—Hubert Cambourn, Mr. C. Cambourn. An erect spike with ten large bold flowers. Petals and sepals a dark rose pink shade, the lip heavily marked with red.

Best Cymbidium Seedling for Colour (Australian)—Charm 'Elegance' x Spartan Queen, Mr. L. Sasso. A small erect spike of six large showy flowers. Petals and sepals a deep red shade, the white lip marked with red.

Best Imported Cymbidium Seedling (for Colour)—Irina Celeste x Blue Smoke, Mr. S. Plotkin. A fine display from two arching spikes with a total of thirty-two bold showy flowers. Petals and sepals a good clear green, the white lip heavily marked with red.

Best Cypripedium—Aylesbury, Mr. T. Henry. A medium sized rounded and shapely flower. The dorsal white overlaid with a green suffusion and having red brown spots, the petals brown and yellow green, the pouch red brown with the ventral green.

Best Cypripedium (Maudiae shape)—Maudiae 'Coloratum', Mr. F. Jones. A distinct variety which is the type form of this hybrid, all the greenish varieties of Maudiae are albino forms. The dorsal white with purple stripes with some smaller greenish striping, the petals and pouch purple and brown.

Best Cattleya—

(a) Best White—Bow Bells, Mr. W. Hale. A single medium sized shapely flower. Petals and sepals white, the broad white lip having yellow markings in the throat.

(b) Best Mauve or Pink—Dinah x Martha 'Door-selaer', Mr. N. Chaney. Two huge shapely flowers. Petals and sepals a deep mauve, the lip reddish purple with old gold markings in the throat. The heavy texture ensured a long lasting flower.

(c) Best Yellow—Lc. Goldcrest x Snowdon, Mr. R. Mead. A small plant with two unusual and smallish flowers, with golden yellow petals and sepals, the yellow lip being darker in the throat.

Best Dendrobium—Sir F. Moore x Austinii, Mr. L. Sasso. A fine plant carried ten huge rounded flowers. Petals and sepals white heavily overlaid with mauve, the creamy white lip having a dark plum eye and a mauve edge.

Best Vanda—Rothschildiana, Mr. G. Underwood. An excellently grown plant with an erect spike of twelve medium sized colourful flowers. Petals and sepals a deep mauve overlaid with a darker mauve tessellation, the small lip deep violet.

Best Phalaenopsis—

(a) Best White—Jane L. Kingsbury x Gilles Gratiot, Mr. F. Bassett. An arching and branching raceme with dozens of large attractive and showy flowers. Petals and sepals a clear white, the lip being marked with red brown and yellow.

(b) Best Pink—Reve Rose, Mrs. F. Spurway. A lovely shapely variety with an arching and branching spike of colourful flowers. Petals and sepals a dark rose pink shade, the lip being marked with red.

Best Australian Native Orchid—*Dendrobium kingianum*, Mrs. West. A smallish plant with dozens of large bold flowers. Petals and sepals a dark reddish pink, the white lip being marked with red.

Best Other Orchid—*Lycaste Sunrise* x *Balliae* 'Greycliffe', Mr. J. Arnold. A magnificent display of eight large distinct and striking flowers. Petals and lip a pure white, the large sepals being a soft green overlaid with an unusual red brown suffusion. Granted a Highly Commended Certificate by the Society's Judges.

Best Group of Orchids with Foliage Plants displayed in an area 7ft. by 6ft.—Mr. L. Sasso. An excellent display which was granted a Silver Medal by the Society's Judges. The more outstanding Cymbidiums included: *Memoria Albertii*, an unusual Bodmin Moor 'Allison' a pastel cream; *Cygnus Opalescent*, *Cassandra 'Jennifer'*, *Cygnus 'Janet'*, a pretty Glenbrook 'Girrahween', *Princess Astrid 'Dorothy'*, a shapely white; *Swallow 'Hebe'* pink and a fine *Cassandra 'Snow Queen'*. The various Cypripediums noted were *Mildred Hunter*, a shapely *Lady Emily*, *Noel Hardy*, yellow; a spotted variety *Rhine* x *Severn*, *Gold Rush* yellow; *Anita*, a dainty pastel green. Other miscellaneous varieties were *Dendrobiums* *Sir F. Moore* x *Austini*, *Merlin*, a shapely *Gatton Monarch*, a yellow *Montrose*, the native *falcorostrum* and *kingianum* with a specimen plant of *Aerides vandarum*, bearing dainty small white flowers, as a centre piece. Various small racemes of *Miltonias*, *Odontoglossums* and *Odontioda*, together with *Anthuriums*, *Cordylines* and ferns

completed the display. Winner of the Sander's Bowl and the Hermon Slade Appreciation Prize.

Best Group of Orchids with Foliage Plants displayed in an area 7ft. by 6ft.—(Two Exhibitors)—Messrs. E. & F. Jones. An interesting display with a theme of "Life in the Tropics." Arranged from floor level with a native house and a waterfall effectively placed as a point of interest, the display was admired by all. The most outstanding Cymbidiums noted were: *Cygnus 'Opalescent'*, two plants with five spikes; *Balkis 'Luath'*, three spikes, a bright pink *Istanbul 'Isobel'*, *Memoria Albertii*, yellow, a pleasing spike of *Rusper 'Waverley'*, green with a red lip; *Ispahan 'Mascot'*, *Princess Astrid 'Dorothy'*, two spikes of shapely flowers; *Swallow 'Soulangeana'*, and *'Desert Gold'*, together with *Sussex 'Laelio Sasso'* and *Carisbrooks 'True Rose'*, and *'Florence'*. Among the Cypripediums, *Maudiae*, *'Coloratum'*, *'Bank House'* and *'Magnificum'*, together with a quaint species *Venustum*, contrasted with the rounded and spotted *Perseus* x *Severn*, *Stamperland* and *Sorrento*. The various *Dendrobiums* included *Sunburst*, *Butterfly*, A.M., *Sir F. Moore* x *Regina*, a colourful *Nolan* and several small plants of *kingianum*. An unusual yellow *Phaius maculatus* together with excellent *Anthuriums*, *Dieffenbachias*, *Alocasias*, *Cuprea* and *Amazonica*, various *Calatheas*, *Peperomias* and ferns completed the display. Winner of the W. Southey Wilson Appreciation Prize. Awarded a Bronze Medal by the Society's Judges.

QUEENSLAND'S ANNUAL ORCHID SHOW, 1960

• The Queensland Orchid Society staged its Annual Show for 1960 in the City Hall Supper Room on 16th and 17th September. The Supper Room has been re-decorated since the last Show held there and provided a much more compact setting than the main hall and quite big enough to accommodate the crowd which attended despite the other floral attractions of South-east Queensland at this period of the year.

On entering the hall the visitor was confronted with some outstanding exhibits. Straight ahead was a stand which held Mr. Piper's *Cattleya Bow Bells*, an outstanding plant of this cross and which won the award for the best *Cattleya*. Alongside was Mrs. McCabe's *Laeliocattleya Amacynth*, a good white with coloured lip. Then was Mr. Broughton's *Dendrobium teretifolium* the third place getter in the Best Specimen of the show.

Turning slightly left was a bank of Cymbidiums from Mr. S. Wright, of Woody Point. Included was the second Cymbidium of the show *Arabella 'Waverley'* and first *Vanda*, *V. Leiliana*, together with a good specimen of *V. Ohu Ohu* x *Merv. L. Velthuis*.

Nearby was Mr. E. A. Knoblauch's winning group exhibit by an individual. It contained the best *Phalaenopsis*, *Psyche* x *Rothschildiana* and the best foliage plant *Xanthisma lindenii magnifica*. Generally, the exhibit was a collection of superbly grown foliage plants — *Anthuriums*, *Philodendrons*, *Xanthosmas*, *Aglo-menas*, *Crotons*, *Calatheas*, *Fittonias*, *Schizocacias* and *Alocasias* — forming a background and setting for relatively few orchids. These included *Phalaenopsis* (*Atala* x *La Canada*) x *Doris* carrying three years' spikes, *Dendrobium bigibbum* very much out of season. *Phalaenopsis Wm. Kirsch* a sure winner for a white but with only three flowers open and several others.

Mr. J. Halley, of Ipswich, staged a striking bank of Cymbidiums which gave the lie to the fallacy that Cymbidiums cannot be grown and flowered with any success in the Brisbane area. His first prize winner was *Remus* x *Bartok* with good shape and strong contrasting colours. This plant was later judged by the Award Panel and recommended for a Certificate of Preliminary Commendation, if and when named. Two very good yellows stood out in the exhibit, *Gladys* and *Swallow 'Pure Gold'*, while the best specimen, later judged the second specimen plant of the show, was *Alexanderi* x *Ceres*.

The competitive bench held those plants not re-staged on group exhibits after judging. *Cattleya Dupreana* x *Blendia* by Mr. B. J. Bolger gained second place with its typical *Cattleya* shape, over *Cattleya* Telegraph Hill owned by Mr. Stockton, despite the latter's modern shape and strong reddish hue. Mr. P. K. Searle's *Dendrobium* Pauline, best *Dendrobium* and *D. johannis* with 15 sprays each up to 20 blooms contrasted with the more humble *D. delicatum* and *D. kingianum* (both good specimens) and Mr. Merritt's *Phaius tankervilliae*. *Dendrobium johannis* was later awarded a Certificate of Cultural Commendation. At the end of the bench was *Laelia perinii*, best any other genus, which attracts always with its strong upright spike of star-shaped blooms of a colour not seen in many orchids.

Next was the group display by Sir John Chandler, Mr. S. C. Harveyson, Dr. M. Bell and Mr. C. Hill arranged and displayed by Mr. Harveyson. This display was crowded with flowering plants, so much so that it was hard to appreciate the quality of some of them. The centre-piece was *Cypripedium Maudiae* magnificent, best specimen of the show, carrying five green and white blooms. A cornerpiece was a beautiful white *Cypripedium* hybrid owned by Sir John who, unfortunately, has not its name. There were several other *Cypripediums*, *Phalaenopsis schilleriana* and Marmouset (an outstanding dark pink), a large head of yellow *Epidendrum* Golden Glow and *Cattleyas* of all shades from the clear yellow of Sunburn x Peters to the strong dark *Sophrolaeliocattleya* Phena. *Dendrobiums* were well represented in this group by *Dendrobium* Merlin.

Mr. S. H. Astbury staged a group which included the third *Cypripedium* in Our Prince Eurvast x *Palatine*; several *Cattleyas*, *Dendrobium nobile*, *Anthuriums* and, in the writer's opinion, the outstanding *Cymbidium* of the show,—a nicely grown, unnamed plant carrying one sharply arching spike of soft, apple-green shapely flowers with another spike still to open.

The ladies staged the centre-piece of the main display. *Cymbidiums* arched from the top tier included *C. President Wilson* and *C. Irina Calesta* x *Blue Smoke*, while the lower levels were covered with *Cypripediums* and *Cattleyas* staged amidst foliage. The natives *Dendrobium kingianum* and *D. fusiforme* were prominent while *D. pierardi* from India added its pastel colouring to the effect. The other side of the tiered stand carried the brilliant yellow of *Oncidium splendidum* and *O. Golden Shower* and

the purples of *Dendrobium superbiens* and *D. Bali* and *D. Pauline*.

Near the main centre-piece was a plant of *Cymbidium traceyanum* x *Kittiwake*, the first *Cymbidium* hybrid made and flowered in Brisbane. It was raised by Dr. H. E. Young and first flowered in 1941. *Dendrobium Farmeri*, an Indian species, was nearby.

Messrs. Piper and Stockton staged a small display which included the almost pure white *Cattleya* Vi Bombrowski, the very dark *Dendrobium* Bali and their own hybrid *D. phalaenopsis compactum* x *D. phalaenopsis schroederianum* which has produced several plants with the compact growth of the Queensland species with the better flowers of *schroederianum*. Also included were *Laeliocattleya* Amacynth and *Dendrobium* Liliha, with cut spikes of *Epidendrum* Red Hawaii and Yellow Hawaii, and bowls of the various mixed colours of the same genus. *Epicattleya* Nebo, *Cattleya* Ozora and *Vanda* Honolulu and *Vanda tricolor* completed their exhibit.

The information desk was flanked by two huge bowls of cut *Cymbidium* spikes provided by Dr. R. F. McFadzean, of Burleigh Heads, and the bench down the side of the hall carried among many others, *Cymbidium* Margaret Hess, white with coloured lip, *Cymbidium* Princess Elizabeth, Miranda 'Masie', Louis Sander 'Kirribilli', Bodmin Moor, Lowianum, Swallow var. Dainty and the species *Phalaenopsis amabilis*.

Qantas exhibited blooms from Singapore, provided by The Malayan Orchid Society, from Bangkok, from Hong Kong, Honolulu and California (Rod McLellan Co.). Singapore flowers consisted of *Arachnis* Maggie Oei and *Arandas* Hilda Galistan, James Storei, Mohamed Hamif and Deborah. These quaintly shaped spiders proved their value as cut flowers when arranged by Mrs. Jean Egan, in her driftwood setting and Mr. Alexander, late of Bangkok with his Thai bowls and prayer tables. This setting was also used by him to set off the flowers from Bangkok which included *Vanda* Tan Chay Yan, *Dendrobium* Louisae and a white *D. Caesar*, *Vanda* Nellie Morley and a good yellow *Cattleya* alongside a white.

Honolulu supplied further material for Mrs. Egan with *Vanda* Nellie Morley and *V. Miss Joachim*, while Rod McLellan's flowers gave her plenty of scope. The outstanding feature was *Brassia verrucosa* var. *giganteum*, a really beautiful species which attracted much attention. The *Phalaenopsis* Bikini Cloud (light pink), Doris and Monique var. Valentine contrasted with

the Cattleyas in their heavy strong shades. Laeliocattleya Stonehouse, in modern language and literally was "terrific" with four massive reddish-hued flowers on the one stalk, as was Lc. Oakland with eight-inch flowers of strong reddish purple. The vagaries of hybrids was well illustrated by Lc. Golden Gate var. Sunset (yellow with red lip) and another Golden Gate (purple with a deep purple lip).

Hong Kong flowers were the dainty *Spathoglottis pubescens* the appropriately named "Yellow Buttercup Orchid" and some Arandas.

Other plants to catch the eye around the benches were a massive specimen of *Dendrobium nobile* with hundreds of buds but only a few open (owned by Mr. P. R. Wren), a small dainty blue Vanda 'Souvenir de Berthe Jorzon' (six flowers on a plant six inches high), C. cliftonville with six flowers, *Angraecum sesquipedale* with its waxy star-shaped flowers, and Brassolaeliocattleya Royale.

Among the foliage plants were several good specimens of palms including Kentia, *Cocos weddelliana*, *Phoenix roebellini* and the local Picabeen. *Draecaena godseffiana*, *D. sanderiana* and several others plus the near relatives the Cordylines made good furnishing for the show benches, while Iron Cross rex Begonia, several Monstera and Hoffmannias were attractive in themselves.

The outstanding feature of the Show was the mass of Cymbidiums. This has been missing from Queensland shows for several years and whether it was the type of winter, dry and cold, the beginning of the drought or improved cultural methods which produced the flowers is still to be proved. The Cymbidiums are valu-

able from a display point of view as they provide a bulk of colour in arching sprays capable of effective display. However, in the writer's purely Queensland opinion, they will never displace the Cattleya, the Dendrobium and the Phalaenopsis from their positions of grace simply because there is too much Cymbidium, very little of it of a good clear colour, all together.

Detailed Show awards are as follows:

CLASS 1—

Cattleya: First, C. Bow Bells, Mr. G. L. Piper; second, C. Dupreana x Be. Blendia, Mr. B. J. Bolger; third, Lc. Telegraph Hill, Mr. B. J. Stockton.

CLASS 2—

Phalaenopsis: First, Phal. Psyche x Rothschildiana, Mr. E. A. Knoblauch. (First prize only awarded in this section.)

CLASS 3—

Dendrobium: First, D. Pauline, Mr. P. K. Searle. (First prize only awarded in this section.)

CLASS 4—

Cymbidium: First, Remus x Bartok, Mr. J. Halley; second, Arabella var. Waverley, Mr. S. Wright; third, Louis Sander var. Kirribilli, Mr. C. Broughton.

CLASS 5—

Cypripedium: First, Cyp. Emmer Green, Mr. B. J. Bolger; second, Cyp. Banchory, Mr. B. J. Bolger; third, Cyp. Our Prince Eurvast x Palatine, Mr. S. Astbury.

CLASS 6—

Native Orchid: First, D. johannis, Mr. P. K. Searle; second, D. delicatum, Mr. J. K. Morgan; third, D. Kingianum, Mr. R. A. E. Doolan.

CLASS 7—

Vanda: First, V. Leiliana, Mr. S. Wright. (First prize only awarded in this section.)

CLASS 8—

Any other Genus: Laelia perrinii, Mr. P. K. Searle. (First prize only awarded in this section.)

CLASS 9—

Novice: First, Cyp. Chieftain, Mr. B. V. Simmons. (First prize only awarded in this section.)

CLASS 10—

Composite Exhibit (Individual): First, Mr. E. A. Knoblauch. (First prize only awarded.)

CLASS 11—

Composite Exhibit (Group of Growers): First, Sir John B. Chandler, Dr. M. Bell, Mr. T. C. Harveyson, Mr. C. Hill. (First prize only awarded.)

CLASS 12—

Best Orchid Specimens: First, Cymbidium Maudiae Magnificum, Sir John B. Chandler; second, Cym. Alexander x Ceres, Mr. J. Halley; third, D. teretifolium, Mr. C. Broughton.

CLASS 13—

Foliage Plant: Xanthosma Lindinii Magnifica, Mr. E. A. Knoblauch. (First prize only awarded.)

ORCHID CLUB OF SOUTH AUSTRALIA

• Spring months have been most interesting. An interstate commercial firm had a sale of orchids again at one of our big city stores in August. The "Jeremiahs" last year predicted that this would ruin our club show, but those with wider vision saw that more people would be orchid-conscious and, having regard for the greater number of enquiries at our Spring Show—September 19th-21st—and the greatly encouraging number of new members, we feel that the latter view was justified.

At the August Meeting, Mrs. C. Homer, who really grows Cypripediums to perfection, gave us a talk on this genus and a potting demonstration and handed divisions to two new members.

The September Meeting which, as is usual for that month, was held on the Thursday preceding our show, so that last-minute information is available. Members enjoyed a world air trip of colour transparencies, which included orchids at Singapore, Chelsea, California and Hawaii and the meeting was prolonged when members wanted more.

Annual Show. Our Show was opened by Lady Rymill, who was presented with a sheaf of Cymbidiums by petite Julie Mehrrens. There was an excellent display of blooms, visitors from Sydney saying that, compared with an equal area of the Sydney Show, ours was the better. The fine centre exhibit by Mr. Neil Christoph was tastefully surrounded by a moss lawn. Other individual exhibits were made by Mr.

F. H. De Rose and Mr. G. C. White and composite displays by more members than usual made up the remainder of the Show. Mrs. J. Conquest and her helpers were besieged by buyers of their corsages.

Our Judge, Mr. Geo. Leverett, again thought our Show would have been even better if held a week later.

Grand Champion Cymbidium: Girrahween 'Enid', Mr. F. Boyle.

Reserve Champion Cymbidium: Girrahween 'Enid', Mr. G. C. White.

Best Pink Cymbidium: Ispahan, Mr. G. C. White.

Best Red Cymbidium: Carisbrook 'Waverton', Mr. R. Waye.

Best Yellow Cymbidium: Woodpigeon, Mr. R. Waye.

Best White Cymbidium: Princess Astrid 'Dorothy', Mr. N. Christoph.

Best Green Cymbidium: Esmeralda 'Dorothy', Mr. N. Christoph.

Best Cypripedium: Stornaway, Mrs. C. Howes.

Best Cattleya: Adena, Mr. F. H. De Rose.

Best Dendrobium: Grace, Mr. F. H. De Rose.

Best Miscellaneous Phalaenopsis: Schilleriana x Ruby, F.C.C., Mr. F. H. De Rose.

Best Native Orchid: *Dendrobium speciosum*, Mrs. J. Conquest.

Many other lovely things were seen, including Cattleyas Bob Betts, Pearl Harbor and Highburiensis. Brassolaeliocattleyas Megara, Marie Marie, Shere and Queen Mary. Dendrobiums jamesianum, nobile, linguiforme, delicatum, Phaius grandifolius, Calanthes, Veitchii and veratrifolia, Oncidium papilio x kramerianum, Epiphronitis Veitchii, Cypripedium Windbourn, Gwen Hammon, Crastia, Rosy Dawn and the species fairrieianum and haynaldianum with five blooms on the one stem. Aeridovanda Dainty and Odontonia Debutante.

Background shrubs were again supplied by the Botanic Gardens and members' indoor plants assisted in presenting a display of tropical profusion.

—W. Harris, 17 Old Belair Road,
Mitcham, S.A.

VICTORIAN ORCHID CLUB SHOW

• Held in the Preston Motors showroom and again opened by Sir Dallas Brooks, the show is perhaps a little more compact than in other years, but there is again a decided uptrend in quality. As Sir Dallas Brooks, Governor of Victoria, remarked, the Orchid Show is an institution in their lives, just as much as it is in ours, and Lady Brooks was presented with a sheaf of Cymbidiums grown by Mr. W. Wright, Jnr.

Naturally Cymbidiums are still the backbone of our shows and, though they are swiftly changing, many of the older ones will be with us for years yet. The champion was again Dorchester 'Jeanette', shown by Mr. R. Martin. Harsh judges could maintain that there was scarcely a Cymbidium in the show that would measure up to their specifications of a champion. Let us say that we have had an adverse season in Victoria and let the harsh ones accept that as a moderator to their opinions.

Girrahween 'Enid' is appearing in embarrassing quantity and filled reserve champion and third place. Mr. Rooney's plant had nine spikes, and to most people would appear to have suffered in consequence. It was an achievement, all the same.

In the colour sections there were two outstanding flowers—Mr. J. Allan's Robin Redbreast, deepest red in colour and quite a good shape; and Mr. H. Nelson's pink Susette x Rio Rita 'Radiant', a nice clean open flower on a spike of good habit. They had no trouble in winning these two sections. One of our oldest and richest coloured Cymbidiums, Priam 'Ada

Meech' won the best Any Other Colour Class for Capt. and Mrs. Cole.

The green and yellow sections were awarded to two familiar orchids in Swallow 'Daffodil' and Glenbrook 'Greenacres'.

Thule 'The Globe', although too cupped for some of the judges, finally emerged the victor in one of the most attenuated sessions ever for the champion Cypripedium. Dark green and spotted, it is in direct contrast to the second place-getter, a brushed red type in a flatter shape that also took the best red in the show.

The Cattleya went to one of our most constant show exhibits, Cliftonii 'Magnifica', bred probably about 60 years ago and still hard to beat on its day.

The best exhibit in the show of all genera was probably the *Lycaste skinneri* exhibited by Capt. and Mrs. Cole, with 22 flowers. Beautifully fresh and crisp, it is a credit to these growers to year after year have the same plant so well turned out. It was the best miscellaneous orchid and the best specimen in the show and should be accorded some special distinction.

Vandas are not as popular in Victoria as in other States, yet there were some magnificent specimens at the show. Mr. Kirkbright took the first placing with a Rothschildiana that was staged in the best exhibit of orchids in the show, in arrangement, quality and variety. He was awarded the B. R. Hodgins Award, the prestige award of the Victorian Orchid Club.

And the Show over all? Well, it is shrinking a little where it is gaining in quality; and where a few of the larger growers of other years have dropped out there is no one to take

their place—except, perhaps, the man whom we know so well as “Young Bill” Wright, who promises fair to stage the same large exhibits that we used to see from “Old Bill” years ago. This year he staged a large group of Cymbidiums in one hundredweight lots. How the tables and trestles stood up to those New South Wales pots is a mystery. ‘Young Bill’ put up a magnificent non-competitive display this year—but next year watch out, you growers. Your plants will have to be good when this Melbourne representative of Dos Pueblos settles down.

Following is the prize list:—

CYMBIDIUMS

Champion of Exhibition: Dorchester var. ‘Jeanette’, Mr. R. Martin, second, Girrahween var. ‘Enid’, Mrs. Johnston; third, Girrahween var. ‘Enid’, Mr. F. Rooney.

Best Decorative: First, Sussex Moor var. Judy, Mr. R. Martin; second, Cariga, Mr. J. J. Allan.

Best Green: First, Glenbrook var. Greenacres, Mr. J. J. Allan; second, Esmehur, Mr. L. Gardiner; third, Pixie x Bodmin Moor, Mr. R. Martin.

Best Yellow: First, Swallow Daffodil, Mr. G. McCraith; second, Ethel Ward, Capt. & Mrs. Cole; third, Swallow Daffodil, Mr. J. Rentoul.

Best Red: First, Robin Redbreast, Mr. J. Allan; second, Sulla, Mr. R. Martin; third, Promona, Mr. J. J. Allan.

Best Pink: First, Susette x Rio Rita, Mr. H. Nelson; second, Profita x Remus, Mr. J. J. Allan; third, Louis Sander var. Kirribilli, Mr. Hughes.

Best White: First, Alexanderi Westonbirt x Alexanderi Perfection, Mr. H. Nelson; second, Balkis, Mr. A. Kirkbright; third, Galaxy, Mr. J. J. Allan.

Any Other Colour: First, Priam ‘Ada Meech’, Capt. & Mrs. Cole, second, Doris Aurea, Mr. L. Gardiner; third, Cygnus Janette, Mr. V. Smith.

Best Specimen: First, Girrahween ‘Enid’, Mr. R. Rooney; second, Cooksbridge, Mr. A. Kirkbright; third, Nadina No. 3, Mr. A. Kirkbright.

CATTLEYA

Best in Exhibition: First, Bc. Cliftonii Magnifica, Mr. N. O’Sullivan; second, C. Hillidge, Mr. J. Garton; third Lc. Bucaneer, Mr. A. Kirkbright.

DENDROBIUM

Best Hybrid in Exhibition: First, Sunburst, Mr. J. J. Allan; second, Model, Mr. J. J. Allan; third, Montrose, Mr. J. Rentoul.

DENDROBIUM

Best Species in Exhibition: First, Infundibulum, Mr. C. Davis; second, Infundibulum, Mr. J. Rentoul; third, Mr. H. Schultze.

ODONTOGLOSSUM & HYBRIDS

Best in Exhibition: First, Kadee x Crispum, Mr. A. Kirk-

bright; second, Mandalum x Margia, Mr. A. Kirkbright; Ardentissimum x Crispum, Capt. & Mrs. Cole.

MISCELLANEOUS

Best in Exhibition: First, Lycaste Skinnerii, Capt. & Mrs. Cole; second Lycaste Skinnerii, Mrs. V. Prosser; third, Epidendrum Boundii, Mr. J. Rentoul.

COELOGYNE

Best Specimen: First, Mr. V. Smith; second, Mr. V. Smith. SPECIMEN OTHER THAN CYMBID. & COELOGYNE—

First, Lycaste Skinnerii, Capt. & Mrs. Cole.

CYPRIPEDIUM

Best in Exhibition: First, Thule var. The Globe, Mr. C. Davis; second, Wendwater, Mr. J. Rentoul; third, Noelle Claire var. Picardy, Mr. J. Rentoul.

Best Red: First, Wendwater, Mr. J. Rentoul; second, Mr. J. Rentoul; third, Collingworth x Florence Smart, Mr. G. McCraith.

Best Yellow or Green: First, Grace Darling, Mr. C. Davis; second, Ansun, Mr. C. Davis.

Any other Colour: First, Thule var. The Globe, Mr. C. Davis; second, Noelle Claire var. Picardy; Mr. J. Rentoul; Brita var. Rotunda, Mr. C. Davis.

AUSTRALIAN NATIVE

Best in Exhibition: First, Dend. superbien, Mr. H. Schultz; second, Sarcophilus Hartmannii, Mr. J. Garton; third, Dend. kingianum, Mr. J. Garton.

Vandaceous Type including Phalaenopsis: First, Vanda Rothschildiana, Mr. A. Kirkbright; second, Phal. Reve Rose x Doris, Mr. J. Allan; third, Vanda Rothschildiana, Mrs. D. Blessley.

NOVICE SECTION

CYMBIDIUM

Best in Novice Section: Princess Astrid var. ‘Dorothy’, Mr. G. Swenson.

SPECIAL MEMORIAL SECTION

B. R. Hodgins Award: Best display having a minimum of 5 genera, Mr. A. Kirkbright.

R. Vick Award: Best display exceeding 60 sq. ft., Rentoul and Gardiner.

J. B. Cameron Award: Best display not exceeding 60 sq. ft., Mr. R. Martin.

E. P. Johnson Award: Silver Medallion—A. Kirkbright, R. Martin, W. Wright, Rentoul & Gardiner, J. Allan, J. Garton, V. Smith, H. Nelson. Bronze Medallion—R. Hodgins, Capt. & Mrs. Cole, Melbourne Eastern, C. Davis, G. McCraith, N. O’Sullivan.

SPECIAL TROPHY SECTION

Wondabah Orchids (Prize donated by Wondabah Orchids, Mr. L. Giles): Best Display of Orchids judged on quality with effective display. To be won five times or three times in succession, Mr. J. J. Allan.

Mr. G. Leverett: Cymbidium—Exhibited at a Victorian Orchid Club Show for the first time, Rosanna var. Kerry, Mr. J. Rentoul. (Prize donated by Mr. G. Leverett.)

Mr. G. Floyd: Dendrobium—best specimen Dend. Infundibulum, Mr. C. Davis. (Prize donated by Mr. G. Floyd.)

Mr. R. Hodgins: Cypridiums—Best Display, Mr. C. Davis. (Prize donated by Mr. R. Hodgins.)

RIBBONS DONATED BY MR. JACK REID

Champion Cymbidium: Blue Ribbon, Mr. R. Martin.

Reserve Champion Cymbidium: Red Ribbon, Mrs. Johnston.

Best Cattleya: Blue Ribbon, Mr. N. O’Sullivan.

Best Dendrobium: Blue Ribbon, Mr. J. J. Allan.

Best Cypridium: Blue Ribbon, Mr. C. Davis.

THE ORCHID SOCIETY OF WESTERN AUSTRALIA (INC.)

SPRING FESTIVAL — TOWN HALL, PERTH

October 6th and 7th, 1960

• The Annual Spring Festival was held during Royal Show Week, in glorious weather, and attracted a large attendance of members and the public. From its 200 members 92 entries were received, of which 54 were Cymbidiums, indicating the progress made in flowering this somewhat unpredictable species under Perth conditions. The Society extended a very warm welcome to Mr. Frank Slattery, of Sydney, who, despite his many N.S.W. obligations and the busiest time at his nursery, had generously consented to fly to Perth and judge this Show. He brought with him a display of award-

winning and high-class named Cymbidium flowers from Sydney which, together with a similar exhibition from Mr. E. Kingsmill, of the Commercial Banking Coy. of Sydney (kindly made available by the Perth Manager, Mr. J. Somerville), created great interest, particularly to members of the Society.

A full attendance of our recently formed Judging Panel expressed keen interest, particularly in the judging for colour. The Champion and Reserve Champion Cymbidium were decided by a majority vote of the panel.

The Spring Festival was opened officially by our Patron, the Hon. Sir Ross McLarty, K.B.E., who was accompanied by Lady McLarty, the recipient of a shoulder spray of Cymbidiums, presented to her on behalf of the

Society. Sir Ross congratulated the Society on its rapid progress and pointed out that West Australia was famous for its wildflowers, including quite a few native species of orchids.

During the evening Mr. Slattery showed a selection of his colour slides taken during his recent visit to London and return through America and Honolulu, with appropriate commentary, to a packed audience of members and the general public.

The principal prize winners included:—

CYMBIDIUM—

Champion: Mr. Ken Birk, Swallow var. Soulangeana.
Reserve Champion: Mr. Roy Brown, Girraheen 'Enid'.
Best in Members' Section: Mr. & Mrs. F. Power, Ispahan 'Mascot'.

Best in Novice Section: Mr. L. Brown, Arabella Magnificent.

OPEN SECTION—

Yellow: Mr. A. C. Dawson, Miranda 'Maisie'.
Green: Mr. A. C. Dawson, Ispahan 'Mascot'.
Pink or Red: Mr. J. Brasington, Redstart.
Light Shade: Mr. J. Brasington, Louis Sander x Priam.

MEMBERS' SECTION—

White: Mr. & Mrs. F. Power, Juliet.
Yellow: Mr. A. C. Dawson, Swallow 'Daffodil'.
Green: Mr. A. C. Dawson, Esmeralda.
Pink or Red: Mr. R. Brown, Girraheen 'Enid' (Reserve

Champion).

Light Shade: Dr. E. L. Griffiths, Dorchester.

Dark Shade: Mr. & Mrs. F. Power, Peri var. Waverley.

Two Distinct: Mr. & Mrs. F. Power, Sussex Laelia Sasso, Miranda 'Maisie'.

Three Distinct: Mr. Ken Birk.. This group included the Champion, Swallow Soulangeana.

Specimen: Mr. Roy Brown, Pauwelsii.

Decorative: Mr. R. Harrison, Rawson.

CATTLEYA—

Champion: Mr. B. Cantwell, Matador.

White: Mr. E. Young, Highburyensis.

CYPRIPEDIUM—

One: Mr. H. Mercer, Alcibides Illustrious.

Two: Mr. H. Mercer, Holdenii and Stoneii.

DENDROBIUM—

One: Mr. K. Birk, *nobile*.

Australian Species: Mr. H. Lodge, *speciosum*.

PHALAENOPSIS—

One, or any orchid not elsewhere on schedule: Mr. H. Mercer, Rothmago x Helle.

NOVICE SECTION

CYMBIDIUM—

Light Shade: Mr. L. R. Brown, Arabella Magnificent.

Dark Shade: Mr. B. Lakides, Louis Sander Kirribilli.

Two, not necessarily distinct: Mr. I. McLaren, Princess

Astrid 'Dorothy', Cassandra Toxteth.

Cattleya: Mr. H. Foote, Lc. Ann O'Brien.

Dendrobium: Mr. H. Foote, Peirardii.

Odontoglossum: Mr. H. Foote, Arnaga x Petit Ami.

Display of Orchids and Pot Plants: Mr. Ken Birk.

—S. P. Hall.

COMMONWEALTH BANK ORCHID SOCIETY

• Despite the difficulties associated with transporting orchids to and from the city during working hours, the Annual Spring Festival was held in the Recreation Room of the Commonwealth Banking Corporation, Martin Place, Sydney, on 20th September. Over 80 exhibits were presented in an extremely attractive profusion of colour, and the display was very ably judged by Messrs. Slattery and Broadbent.

The entries by novice members from the Society were a very pleasing feature, especially from those who had not previously exhibited. In fact, one such member, E. R. Figgis, secured two first and three second prizes, and another, A. Matthews, carried off two first prizes! This was a gratifying indication of an ever-increasing interest in the Society's activities.

The Champion Cymbidium was a very attractive Balkis 'Luath' exhibited by Keith Spencer, and Arthur Hynard, the hard-working show marshal, was awarded Reserve Champion prize for Princess Astrid 'Dorothy'. Prizes for the best seedling were presented for the first time this year, and interest in this class is expected to develop in future.

The Festival was viewed by large numbers of the staff of the various banks as well as by members of the public. The outstanding impressions this year were the general improvement in quality and the great variety of colours so breathtakingly displayed.

NORTH SHORE ORCHID SOCIETY—10th ANNUAL SHOW

Held September 8th and 9th

• If high honours at first outing mean anything Cymbidium Anita var. Diane has a long show bench future in front of it. Best imported seedling and Reserve Champion at first outing! Dorchester Jeanette acquired the major honour, but the little extra assurance gained by the younger rival may well turn the tables next time. Hubert Cambourn, a soft pink and good form, was the Australian-raised youngster to excite comment, as well it might. Cygnus Janet, Glenbrook Greenacres and Erica Sander var. Sailor Bay combined to present three decoratives in the best tradition. Like old soldiers, old orchids never die—if they have the quality in the first place. North Shore's novice members surpassed themselves. Blooms of this quality from novices augur well for the future and what a grand thing to see prizes taken out, in this company, by flowers at the Balkis standard. Season trouble lowered numbers on miscellaneous benches, but *Oncidium Tigrinum*, *falcostrum* and a magnificent *speciosum* made a bold feature. In the massed display restrained use of an unusual fern helped the winner to present varied genera at their individual best. General verdict of the show: "Highest quality ever."

—M. B. Lloyd.

KU-RING-GAI ORCHID SOCIETY ANNUAL SHOW

• From a stage flanked by massed orchids and associated foliage plants the Mayor of Ku-ring-gai, Alderman A. H. Jago, opened the Annual Show of the Ku-ring-gai Orchid Society on Friday, 12th August. The Mayor said that the number and quality of the blooms reflected great credit on the individual growers and that the Society was to be congratulated on the manner of their presentation.

The champion Cymbidium of the show, Sussex Dawn x Dorothy May, shown by Mr. A. Gillson was a magnificent plant of two spikes of shapely blooms of a deep green colour with a contrasting red lip. The reserve champion, a seedling of 'Judy' var. Windsor Rose, was a flush pink bloom of good rounded shape and texture exhibited by the Show Marshal, Mr. W. Huxley.

Much interest was created by the winner of the "Best Specimen", a colossal plant of 'Alcantara Cameo' bearing no less than eighteen spikes of delicately flushed pink blooms, a truly magnificent effort on the part of the grower—Mrs. E. Atwell. A junior member of the Society, Master Graham Miels, scored a notable success with an excellent plant of 'Swallow Lemon Beauty' by carrying off the first prize in the Novice Members Section as well as two prizes in other sections.

Australian Native Orchids were well represented by a number of exhibits artistically arranged on portion of logs, on paper bark and other media. The winner in this section, Mr. R. Deane, presented an exhibit of *Dendrobium teretifolium* in a massed formation on a large piece of tree bark—a beautiful presentation of a lovely native orchid.

The section devoted to "Orchids and Associated Foliage Plants" was won by Messrs. J. Taylor and M. Jenkinson for an exhibit showing masses of Cymbidiums in association with native and miscellaneous orchids together with foliage plants and mosses. It was arranged to achieve a most artistic effect.

In the non-competitive portion of the show the two exhibits entered by Wondabah Orchids Ltd. and Dos Pueblos Orchid Company attracted a great deal of admiring interest by the public, the Australian-raised 'Remus' seedlings presented by Mr. Giles, in particular, created much favourable comment.

In all, the Show proved an outstanding success, was well supported by the public and demonstrated an important point, that the orchid season is gradually extending. With the production of better blooms in the earlier varieties we can confidently look forward to viewing our favourite blooms for a much longer period.

B. Haines,

Hon. Secretary.

MACLEAY RIVER FIRST ANNUAL ORCHID SHOW

• The Macleay Valley First Annual Orchid Show was held in the Memorial Hall, Kempsey, on the 16th September, 1960. The Judge was Mr. R. Smith, Sawtell, founder of Sydney Orchid Society.

Judge's comments were that the quality of entries was outstanding, the organisers were to be congratulated, that they did not overlook a single item and judging was a pleasure. It was a nicely balanced show and there were some wonderful blooms. The superb quality was amazing for a first, it was outstanding.

Champion of the show was won by Mr. C. L. Hawes, of Kempsey, with a superb spike of Balkis 'Luath', also the Reserve Champion with Princess Astrid 'Dorothy Best'. The Cymbidium Novice section was won by Mrs. Sadi Boardman, of Kempsey, with Dorchester 'Jeanette'.

A noteworthy Cymbidium displayed, Miretta 'Matchless', was flowered to perfection by one

of the pioneer growers of this district, Mr. A. Nelson Aldavilla, was particularly admired by the huge crowd which attended.

A beautiful first flowering *Dendrobium Thwaitesii* x Merlin was displayed by Mr. A. Street, of Kempsey.

The Sections and prize winners were:

Group of (3) Distinct Varieties: C. L. Hawes, Balkis var. 'Luath', Princess Astrid var. 'Dorothy', Cassandra.

Group of (3) Distinct Colours: J. Cavrilis.

Best Decorative Cymbidium: A. C. Nelson, Swallow var. Cream.

Red Cymbidium: J. Gavrilis, Cyzara var. Remembrance.

Yellow Cymbidium: A. C. Nelson, Swallow var. Pure Gold.

Green Cymbidium: A. C. Nelson, Miretta var. Matchless.

Pink Cymbidium: G. Hughes, Macksville, Susette.

Any other colour: Mrs. Sadi Boardman, Carisbrook var. Florence.

Best Cymbidium Novice: Mrs. Sadi Boardman, Dorchester var. 'Jeanette'.

Best (2) Novice: Mrs. Sadi Boardman, Princess Astrid var. 'Dorothy', Istanbul var. Isobel.

Best Coloured Novice: Mrs. J. Wooderson, Swallow var. 'Daffodil'.

Best Cypripedium: A. C. Nelson.

Specimen Cymbidium: G. Hughes Macksville.

Best Cattleya: A. H. Street.

Best *Dendrobium*: A. H. Street, *Dendrobium Thwaitesii* x Merlin.

Best Australian Native: A. C. Nelson.

Best Vanda: Mrs. Sadi Boardman.

C. L. Hawes, Hon. Secretary,
Macleay Valley Orchid Society.

EAST HILLS & DISTRICT HORTICULTURAL AND ORCHID SOCIETY

• East Hills and District Horticultural and Orchid Society held its 8th Annual Orchid Show at Panania on Saturday, 24th September, and it was voted by the committee as one of its best, both as regards quality and quantity of entries and the number of visitors who came to see the show. Due to a lack of suitable accommodation for the staging of these Shows the committee has been compelled to limit entries to "members only", which is most regrettable and the members are looking forward to the time when they can take on all-comers.

The Novice Cup was awarded to Mr. E. Kennedy, of Panania, for the Champion of the Show, 'Dorchester Jeanette', while Mr. A. Chalmers took both the Reserve Champion with 'Princess Astrid Dorothy' and the Champion Coloured Cymbidium with his 'Esmerelda var. Dorothy'. Mr. Kennedy was awarded the "Valley Orchids" Trophy for the Best Export Cymbidium with 'Cygnus Opalescence' and Mr. Carlaw, of Bass Hill, won the Novice Section with 'Princess Astrid Dorothy'.

J. E. Swords, Secretary.

Results of the Sydney Orchid Society 16th Annual Show

• Held at the Remembrance Hall, 220 Lakemba Road, Lakemba, on 27th August, 1960.

The President and Committee were really concerned about the success of the show this year because of a change in halls.

As it happened, the show was a wonderful success financially and a keen interest was taken in the show by the public.

Results were:—

Open Section

Champion Cymbidium of the show was won by Mr. Sid Cooke with a Dorchester "Jeanette".

Reserve Champion was won by B. Schwartz, also with Dorchester "Jeanette".

Best two Cymbidiums won by B. Schwartz were Dorchester "Jeanette" and a new Cymbidium seedling, a lovely pink Judy, a Dos Pueblos seedling flowering for the first time.

Sid Cooke gained second prize with Balkis "Luath" and Dorchester "Jeanette".

The best three for colour was won by Mr. Charlie Wilson with a delightful entry in its class.

The best three Cymbidiums: Mr. Sid Cooke gained first prize with A. Gillson second.

The best four decorative Cymbidiums was won by B. Schwartz.

Best Export Cymbidium was won by Charlie Wilson with a well grown plant of Ispahan "Lindfield."

Best Native Orchid went to B. Schwartz with *Sarcochilus falcatus*.

Best Cymbidium Seedling went to Capt. Harry

WESTERN SUBURBS ORCHID SOCIETY

• The Sixteenth Annual Orchid Exhibition of the Western Suburbs Orchid Society was held on Friday, 30th September, and Saturday, 1st October, 1960, in the Memorial Hall, Concord.

For the Orchid lover the show provided a delightful display. The main feature was a non-competitive display put up by the President and his wife, which occupied the whole of the stage and rising in tier to well over six feet, containing representatives of most of the quality Cymbidiums with sprinklings of foliage plants. This exhibit provided a backdrop for a record number of entries in the competitive sections, the main feature of which was the high quality and freshness of the flowers.

The Schedule which provided for an Open and Novice Member section ensured that outside members of affiliated societies could enter in practically all classes. Apart from making sure that the prize money was spread it ensured that the high quality was represented in all classes. The Grand Championship, Best Three and Best Three Decorative were won by members, while the Reserve Championship, Best Export and Best Seedling were won by affiliates.

Mills with an excellent Ann Green, very lovely shape.

The 6 x 6 exhibit was won by Mr. & Mrs. Foy Bassett with a glorious display. It was the focal point of the whole show.

Harry Wight and J. Scott gained second prize.

Best Coloured Cymbidium of the Show was won by Albert Chalmers.

Members' Section

Best two Cymbidiums: B. Brady won this section with Dorchester "Jeanette" and Balkis "Luath".

A. Mead gained second with a lovely Sussex Dawn "Dorothy May" and Kairouan "Karess".

Best Red Cymbidium: Won by Mr. H. Wight.

Best Green Cymbidium: Won by Mr. A. Chalmers.

Best Yellow Cymbidium: Won by Mr. W. Williams.

Best Export Cymbidium: Won by Mr. H. Wright.

Novice Section

Best Cymbidium: Won by Mr. Smythe.

Best Coloured Cymbidium: Won by Mr. D. Pearce.

Best Other Orchid: Won by Mr. A. Chapman.

MANNING RIVER ORCHID SOCIETY

• Manning River Orchid Society held a very successful show two days and two nights on September 30th and October 1st. Mr. H. Bond, of Marmong Point, was Judge.

Grand Champion: Cymbidium Mary Bea seedling 'Ernell', Mr. E. W. Hibble.

Reserve Champion: Cymbidium Girraheen 'Enid', Mr. J. C. Folkard.

Colour Champion: Cymbidium Swallow 'Daffodil', Mr. George Coleman (Wal Rothwell Memorial).

EASTWOOD SPRING SHOW

• The Eastwood and District Orchid Circle held its Spring Show at Eastwood on September 23rd and 24th. Displays of orchids and foliage plants were the principal features of the Show, occupying about half the wall space of the hall.

In the open section, a magnificent display by J. and J. E. Mackinney won the American Orchid Society's trophy for the best entry in this class, and a fine exhibit by H. G. Burley was runner-up.

In the two classes for members' displays, groups of members combine to make exhibits, and six very attractive arrangements resulted.

Bridal bouquets, against a background of velvet, occupied the stage and this part of the show proved a very popular one with the general public.

Mr. W. Hale's plant of Swallow 'Soulangeana' was chosen Grand Champion and Mr. H. G. Burley's Balkis 'Luath' was Reserve Champion, while Mr. C. E. Bronger's Balkis 'Luath' was best Novice Cymbidium.

Other prizewinners included Mr. Longley's San Francisco — nine large pale green flowers with red lips — judged best seedling and the same grower's Dendrobium Townley Monarch, five feet high and covered with flowers of *nobile* hybrid type.

The first prize for Miscellaneous Orchids was won by Mr. J. Mackinney's *Miltonia Storm* with eight large deep red flowers and the second prize went to Mr. H. G. Burley's *Vanda Onomea*.

A BEAUTEOUS THOUGHT

I saw them poised as if for flight, yet lingering
for my delight,
Ethereal—symmetrical—so delicate and light,
I saw them held as if some spell, enchanting
in a fairy dell,
Could break by beating of my heart, that my
delight did tell,
I saw them poised on a slender stem, radiant,
beauteous diadem,
How could faltering words of mine — those
Orchids — hope to picture them!
Orchids! from hand of God to man — beauty
to gladden earthly span —
Promise of God — to once again, restore the
world as it began.

—Mrs. C. L. Kelly, 14 Clyde Rd.,
Dee Why, N.S.W.

SUTHERLAND SHIRE ORCHID SOCIETY

• The 1960 Annual Spring Show of the Sutherland Shire Orchid Society held in the Kindergarten Hall, Miranda, on Saturday, the 24th of September, was considered to be one of the best ever held by the Society. The standard of exhibits was high and the judges were set a difficult task in deciding the winners of the various sections. The show was well patronised by the public, attendances being well up on last year.

The champion Cymbidium of the Show was Dorchester Jeanette exhibited by Mr. A. Birdsall. A large vigorous plant with an arching spike of truly magnificent flowers. Petals and sepals white with a very faint pink suffusion, the lip white with reddish spotting.

The reserve champion was a beautiful plant of Swallow Soulangeana exhibited by Mr. S. Cooke. The flowers had large, broad, heavy textured sepals and petals which were pink with almost orchid mauve. The firm white lip had prominent red markings.

In the novice section the winner was Girahween Enid, which was a well-established plant and the spike presented for judging was nicely arched with numerous good colour mushroom pink flowers. The runner-up was Balkis Luath, a young, well made up plant with slightly flush pink blooms showing at their best.

Among the winners in the coloured Cymbidium section were:—

(a) Red or Pink—Carisbrook No. 27.

(b) Green or Brown—Lowi-Concolor x Goosander.

(c) Green—Esmeralda.

A feature of the show was a section providing for two or more exhibitors to combine and present a display of Orchids and foliage plants. These displays were very well done and had the effect of presenting small shows within the main show. An exhibit by Messrs. J. Hauenstein, Dore and Bell featuring Orchids of all genera and foliage plants provided a very pleasing display of top quality orchids, from among which came the best *Cypripedium* of the show, River Plate, the best other Orchid, *Odontioda Sallam*, and also the second prize *Vanda*, a *Rothschildiana*. In the smaller displays (5ft. x 3ft.) there were three very excellent entries, one of which was remarkable in that it consisted almost entirely of *Epidendrums*.

Native Orchids presented a truly magnificent spectacle, not only in their own particular section but also in the displays. The Sutherland Shire Orchid Society is renowned for its Nat-

ives and on this occasion patrons certainly received their money's worth. The variety of this species was more than amply demonstrated by the winning entry in the best collection, which was exhibited by Mrs. F. Lipanovitch. The best native *Dendrobium* was judged to be a very nice plant of *falcorostrum*, while the winning entry for the best Native Specimen was a many spiked plant of *gracillimum*.

Mr. Bert Bonnyman exhibited a very nice plant of *Dendrobium* Queen of Gatton, which won first prize in the *Dendrobium* section, and also a well-grown and flowered plant of *Vanda Rothschildiana*, which won first prize in its section. To make a threesome of it, Bert won the *Cattleya* section with beautifully flowered Bow Bells.

Among the plants exhibited in the Best Other Orchid Section were several lovely specimens of *Lycaste Skinneri*, one of which managed to take second place in this section.

A class which the Society had recently conducted in the Art of Floral Arrangement paid dividends judging by the quality of entries in these sections and the judge must have been hard put to decide which were the winners.

A non-competitive trade exhibit by Mr. Frank Slattery presented a fine range of varied and colourful *Cymbidiums*, the most eye-catching of which was a lovely spike of *Cariga Sorrento*. Also included in the exhibit were *Vandas*, *Dendrobiums*, *Cypripediums* and ferns.

Another non-competitive trade display was presented by Mr. Alf Perry. In this display a very nice plant of *Cymbidium* *Lysias* 'Chastity' compelled the attention of the viewer. The display was finished off with *Oncidiums*, *Anthuriums*, *Crotons* and ferns.

A hall still full of spectators at closing time convinced the committee that its labours were not in vain and that the efforts of all concerned had combined to make a very pleasing and enjoyable show.

WARRINGAH ORCHID SOCIETY

• The Society's Eighth Annual Orchid Exhibition staged in the Mosman Town Hall on the 25th and 26th August was the best for some years. Ideal weather conditions resulted in improved attendances on both days. Most pleasing features were the continued improvements in the quality and quantity and variety of the flowers shown; also the successes of members in the Open Section.

Large increases in the number of entries in the Members' Sections denoted continuing interest in the culture of orchids.

The Champion *Cymbidium*, *Balkis* 'Luath', was shown by Mr. E. F. Bingham, who also exhibited the Best Specimen *Cymbidium*, *Sussex* 'Laelia Sasso'. Mr. H. French's *Dorchester* 'Jeanette' was Reserve Champion. For the Best Coloured *Cymbidium* Mr. R. W. Hall won first prize with *Iris* Hepburn 'Avalon', Mr. S. G. Cooke's Woodpigeon was second.

The Silver Medal presented by the Orchid Society of N.S.W. to the best member exhibitor at the Show was won by Mr. E. J. Longley, who also won 1st and 2nd in the best three *Cymbidium* Section. Mr. Cooke won 1st and Mr. L. Sasso 2nd for the best three coloured *Cymbidiums*.

Best six *Cymbidiums*: 1st, Mr. S. Cooke; 2nd, Mr. R. W. Hall.

Best two decorative *Cymbidiums*: 1st, Mr. S. Strahan; 2nd, Mr. G. Gorsky.

Best display of Orchids: 1st, Mr. R. Trenerry—highly commended.

Best *Cypripedium*: 1st, Mr. T. Henry; 2nd, Mr. H. French. Mrs. Smith won the W. W. Kavanagh Cup for lady members.

ILLAWARRA DISTRICT ORCHID SOCIETY

• The Illawarra District Orchid Society held its 9th Annual Orchid Festival in the Pioneer Hall, Wollongong, on Friday and Saturday, 2nd and 3rd of September, 1960.

The members of the Society are mostly *Cymbidium* growers; so the Festival is one big *Cymbidium* display.

The Grand Champion was a beautiful *Balkis* 'Patricia' shown by Mr. A. Pryor, of Jamberoo.

The Reserve Champion, *Balkis* 'Luath', shown by Mr. Jack Hodgkinson. Amongst the other exhibits were a couple of *Dorchester* *Jeanettes* and more *Balkis* 'Luaths'. So we see the champions of yesterday still taking the honours in spite of the new blood introduced in recent years.

The show was a financial success and a cheque for £30 will be handed over to the Austinmer Ladies' Auxiliary of the Mosman Spastic centre, with whom we worked.

Feature of our Festival was the giving of two *Cymbidium* plants every ½ hour as lucky door prizes. A total of 76 plants donated by members was distributed in this manner.

Our lady members assisted by making shoulder sprays for sale and running a stall for the sale of plants and back-bulbs.

To the Judges (Mr. Frank Slattery, Mr. Alan Birdsall, Mr. Harold Crutch, Mr. Harry Mills and Mr. Bert Schwartz) go our thanks and appreciation for a job well done.

E. Atwell, 344 Main Rd., Austinmer.

LOW COST

perfect
protection
for
PRIZE BLOOMS



sarlon

**EVERLASTING
SHADE CLOTH**

Sarlon provides the essential protection that most young plants and prize blooms require. Sarlon shade cloth is woven from 100% Saran, a tough, long-wearing plastic that won't rot or corrode under any weather condition. Sarlon gives uniform shade . . . comes in different meshes to provide the exact degree of shade needed . . . breaks driving rain, eliminates drips and gives good hail and heavy rain protection . . . holds in heat effectively when burners or pots are used . . . helps keep out insects . . . removes fire hazard, as it will not burn . . . is extremely light and easy to support.

Ask for Sarlon at hardware stores, garden departments and nursery suppliers.

SARLON INDUSTRIES PTY. LTD.

47 McEVoy STREET, WATERLOO, N.S.W.

PRADHAN BROTHERS Exporters	Importers	INDIAN ORCHIDS, FLOWER BULBS, AND 1959 NEW HYBRIDS, DOUBLE GERBERA			Pachey Khani Pakyong, Sikkim India
		100 Diff. Indian Orchids—Cymbidium, Dendrobium, Aerides, and Vanda variety	10/-	per 100	
		6 Diff. Colour Ludwig Amaryllies	16/-	" "	
		Double Amaryllies	10/-	" "	
		50 Diff. named fancy leaved Caladium	18/-	" "	
		Curcuma Roscoonan	10/-	" "	
		Eucharisily	4/-	" "	
		Heamenthus Multifolius	12/-	" "	
		Nerinelily	4/-	" "	
		Zephyrenthus Sulperia	6/-	per 1000	
		Coperenthus	6/-	" "	
		100 Diff. colour 1959 New Hybrids Double Gerbera 7" to 8" open best quality	18/-	per 100	
		Double Gerbera Seed	2/-	per 1000	
Air Freight Extra.		Complete List and particulars upon request.			

CYMBIDIUM ORCHID SEED FOR 1961			
Etta Barlow x Great Day, Orion.	Babylon, Castle Hill x Etta Barlow.		
Etta Barlow x Alexanderi, Westonbirt.	Joan of Arc, Northvale x Great Day, Terra.		
Joan of Arc, Northvale x Etta Barlow.			
	<i>Two flask packet £4/10/- each.</i>		
John Blowers x Etta Barlow.	John Blowers x Cleo Sherman		
Lump of Gold x Babylon, Castle Hill.	Ortin x Babylon, Castle Hill.	John Blowers x Alexanderi, Westonbirt.	
Ortin x Etta Barlow.	John Blowers x Joan of Arc.	Dorchester x Babylon, Castle Hill.	
Miracle x Great Day, Terra.	Miracle x Joan of Arc.	Ortin x Joan of Arc.	
	<i>Three flask packet £4/10/- each.</i>		
Australian currency accepted.	Seed pods maturing, Jan., Feb. and Mar.		
WILLARD E. GRAVES			
2743 KELTON AVE., LOS ANGELES 64, CALIFORNIA			

SHADING PROBLEMS SOLVED FOR YEARS TO COME.

LUMITE SARAN SHADE CLOTH


Lowest annual cost. *Widest range of economy shading.*

ORCHID GROWERS:

Whatever your shade problem may be—if you are a Cymbidium grower and need to cover your bush house or outdoor beds, or if you GROW ORCHIDS UNDER GLASS, you will find Lumite Saran shade cloth ideal for the specific shade desired.

Instal it and forget it . . .
it will last for years.

We are Australian agents for this fabric—we invite your inquiries—contact us for samples.



(AUST.) PTY. LTD.

Box 90 P.O., DEE WHY, N.S.W. 'PHONE 98.6321

DECAYED WOOD ORGANIC COMPOST

This compost is made in accordance with the formula published in the Australian Orchid Review. It is ready for use without further additions and has been successfully tried and proven over a period exceeding 5 years.

THE PLANTS DEFINITELY REQUIRE NO FURTHER FEEDING AT ANY TIME

NEW REDUCED PRICE 30/- per cwt. ex-nursery

NURSERY SUPPLIES

18 BUENA VISTA AVE.

DENISTONE. WL3180

AUSTRALIAN ORCHID REVIEW

Published Quarterly.

Circulating throughout Australasia, New Zealand and Overseas.

Advertising Rates on application to

SHEPHERD & NEWMAN PTY. LTD.

Yurong Street and Hargrave Lane, Sydney

Telephone: FA3178

ORCHID GROWERS !

Save Time

By getting this magazine direct from

AUSTRALIAN ORCHID REVIEW

58 Yurong St., Sydney

FA3178

Subscription: 12/6 a year or 4 issues posted
" 1 dollar 42 cents American.

UNLIMITED GIFTS — BOOKS!

FLOWER ARRANGEMENT CALENDAR 1961 (Helen van Pelt Wilson), illust., 13/-. Post, 1/3d.
ORCHIDS (Matthias Riehl) with 16 superb colour plates reproduced from original water-colours by Karl Alexander, £3.2.0. Post 2/-.

BREAKFASTS & BRUNCHES—Festive, Simple and Refreshingly different menus and recipes, illust., £1.11.6. Post 1/9d.

CYMBIDIUM CULTURE & VIRUS DISEASES (J. Bisset & H. W. Wilson), illust. £1.0.0. Post 1/-.

FISHER'S GHOST (Douglas Steward). An Historical Comedy, illust. Norman Lindsay, Ltd. signed edn. of 200 copies, £2.5.0. Post 1/-.

ORCHIDS FOR THE CALIFORNIA AMATEUR (H. M. Butterfield), col. & b/w plates, 4/6d. Post 6d.

THE INNER HISTORY OF THE KELLY GANG (J. J. Kennecally), special purchase, 6/6d. Post 9d.

VENEZUELAN ORCHIDS ILLUSTRATED (Dunsterville & Garay), Vol. one now available, well illust., with line drawings, £6.16.0d. Post 6/-.

TINKA AND HIS FRIENDS (Brownie Downing & John Mansfield), delightfully illus. in colour, ideal gift for children, 18/9d, Post 1/6d.

DESIGN & DEPTH IN FLOWER ARRANGEMENT (Emma H. Cyphers), illst., £2.2.6. Post 1/6d.

FAMOUS AUSTRALIAN TRIALS (P. A. Jacobs) includes the Kelly Gang & other colourful trials, 5/-.. Post 9d.

HANDBOOK OF TREES & SHRUBS FOR THE SOUTHERN HEMISPHERE (R. Harrison), illst., £3.3.0. Post 2/3d.

CUP DAY—THE STORY OF THE MELBOURNE CUP 1861-1960 (Maurice Cavanough & Meurig Davies), dramatic and fascinating history of the Melbourne Cup, beautiful horses, customs, fashions, etc., illust. £1.12.6. Post 1/6d.

THE CREAM OF ALPINES (F. Barker) col. & b/w plates, £1.5.0. Post 1/6d.

We search the world successfully for rare and out-of-print books.

Also new and second hand books on Australian, Pacific, Art, Natural History, Gardening, Orchids, Biographies and General Literature. Lists free. Write for Xmas Lists.

We are specialists in Microscopes, Prismatic Binoculars and Astronomical Telescopes, Magnifiers, Barometers, etc.

10X British Achromatic Folding Magnifiers—of great use to Botanists. £3.11.6.

N. H. SEWARD PTY. LTD.

457 BOURKE STREET, MELBOURNE

::

PHONE: MU6129

(Coloured slide dept.)

The Best Orchids in Thailand . . .

THE KING OF THE DARK PHALAEOPSIS TYPE DENDROBIUM

Award Plants of the future from Thai-hybridized Seedlings

Please write for free information and catalogue at

P.O. BOX 953, BANGKOK, THAILAND

25 Different Flowering size spray

Orchids	£5	0	0
Eucharis Grandiflora	£5	0	0
Begonia Rex	£3	10	0
Achimenes mixed	£1	10	0
Kaempheria Rotunda	£5	0	0

12 Different best quality fancy

leaved Caladiums	£3	0	0
Glorioso Rotschildian	£5	0	0
Haemanthus Multifolius	£15	0	0
Curcuma mixed	£5	0	0

ALL PER 100 EACH, BEST FLOWERING SIZE AND POST PAID

Seeds: Hand selected double gerbera £2 10 0 }
 Crossandra Undulifolia £1 10 0 } PER 1000 EACH AIRMAILED

Complete lists on request:—

INDIAN HORTICULTURAL CO., KALIMPONG, INDIA

Malayan Orchids — Favourites around the World

ORCHIDS:

Malayan, exotic and Hawaiian Orchids; Vandas, Arandas, Dendrobiums, Oncidiums, Spathoglottis, etc.

INDOOR PLANTS:

Exotic and Hybrid decorative house-plants; Alocacia, Philodendron, Caladiums, Dieffenbachia, etc., etc.

★ *Malayan Orchids won a Gold Medal at Chelsea during the Third World Orchid Conference* ★

OUR NURSERIES AND COMPLETE STOCK ARE THE LARGEST IN S.E. ASIA

Write for free Catalogues

NAM KEE NURSERIES

361, BUKIT TIMAH ROAD, SINGAPORE, 10, MALAYA

R. E. TRENERRY

"TREMORVA ORCHIDS"
8 BELLAMBI ST., NORTHBRIDGE

Gives an invitation to all interested in growing orchid plants under cool conditions. See the large range of genera that will grow and flower without heat.

Inspection Saturday afternoons or Sundays. Nobody asked to buy. Bring your problems and discuss them.

JB 3059 JB 2791

FOR

ORCHID COMPOST

Todea Fibre

Leaf Mould

Rice Hulls, etc.

SINGLETON AND VAUGHAN PTY. LTD.

398 Pacific Highway, LANE COVE, N.S.W.

JUANITA NURSERY "The Home Of Exotic Plants"

Now have available seedling orchids in 1½" pots. They are in the first stage of growth after repotting from community pots. Listed below is a selection of orchids and indoor foliage plants.

Catt. Granulosa x Maxima	1½" pot	7/6
Catt. Forbesii	" "	7/6
Den. Toquphum x Helen Fukumura	" "	7/6
Vanda Clara S. Fisher	" "	7/6
Vanda Rothchildiana	" "	7/6
Tillandsia Ionanthe	4" "	20/-
Ctenanthe Lubbersiana	5" "	10/6
Vriesia Princeps	5" "	30/-
Dieffenbachia Exotica	5" "	60/-
Sansevilla Bantels Sensation (White banded)		100/-

29 La Boheme Ave., Caringbah, N.S.W.

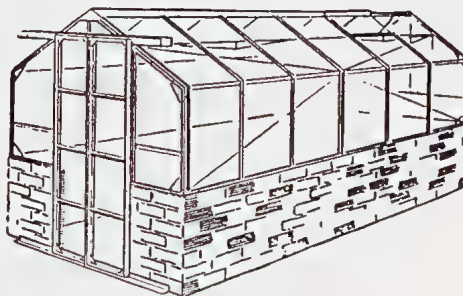
Phone: LB7273

ALUMINIUM ALLOY WALDOR Greenhouses PREFABRICATED

The Waldor "Junior"—Size: 8ft. x 12ft.

Price £103.15.0.

OTHER MODELS ALSO AVAILABLE



For full particulars contact:—

STANHILL PTY. LTD.

34 Queens Road, Melbourne, S.C.2

Phone: BM3361

N.S.W. Enquiries to:—

Frank Slattery

12 Eddystone Road, Bexley, N.S.W.

Phone LY7985

Tasmanian Enquiries:—

Tasmanian Chemicals Pty. Ltd.

129 George Street, Launceston
and

60 Harrington Street, Hobart.

SHOWY ORCHIDS (ADULTS)

In Aerides; Cymbidiums; Dendrobiums; Coelogynes; Cypripediums; Pleiones; Phaius; Saccoboliums; Rhynocostylis and Vandas—

50 diff. named £16 Stg.

25 diff. named £10 Stg.

Cypripedium Insigne in—

10 diff. named £5 Stg.

(All by air mail delivery)

Peter Smithers, M.P. 30 Smith Squire, S.W.1. England, writes—*Your Orchids are doing very well and most satisfactory. Give my name for reference.*

J. N. Pradhan

Flowerwood Nursery.

Kalimpong, India.

*The Oldest French Experiment
in Orchids of Quality*

Maurice Vacherot
“Orchidees”

31 Rue de Valenton

BOISSY-SAINT-LEGER (S. & O.)

Catalogue Free

FRANCE

Orchids from India.**All flowering size.****All 30/- each.**

Dend. Formosum var.

giganteum

White. Orange lip.

..

Dalhousianum

Cream & yellow.

..

nobile var. pendulum

Purple.

..

Farmerii

Pale pink. Yellow centre.

Dend. fimbriatum var. oc-

culatum

..

moschatum

..

pierardii

..

Hildebrandii

..

densiflorum

..

Findlayanum

..

transparens

..

lituiflorum

Yellow. Maroon throat.

Apricot.

Pale mauve.

White and yellow.

Yellow gold. Pendulous.

Pale pink. Yellow centre.

Transparent pink & purple.

Purple and yellow.

Add 3/- per plant for
airfreight. Minimum 5/6.

ALL PLANTS 30/- EACH. FLOWERING SIZE

KIRKWOODS ORCHIDS, 342 SHERIDAN ST., NORTH CAIRNS, NTH. QLD.

Send for general price of other orchids.

No charge for packing.

Rhynchosstylis retusa
phaius Wallichii

Waxy white with pink spots.

30/- each.

Orange yellow with reddish purple.

30/- each.

Also available at **KIRKWOODS ORCHIDS, CAIRNS NORTH, NTH QUEENSLAND.**

**UNSURPASSED QUALITY
ORCHIDS**

by

(P. F. & F.)

VACHEROT & LECOUFLE

**AUTUMN AND WINTER SPECIAL
OFFERINGS**

sent on request for

CATTLEYAS

MILTONIAS

PHALAENOPSIS

Adult plants and seedlings.

C.I.F. prices can be studied.

ALSO COMPLETE ORCHID PRICE LIST
NOW READY—SENT FREE OF CHARGE

“La Tuilerie”—Rue de Valenton
**BOISSY ST. LEGER, SEINE & OISE
FRANCE.**

Telephone: 42

Cables: VALEC

Boissy St. Leger.

**ODONTOGLOSSUMS
ODONTODAS**

and allied genera in great variety are available
to you from the

**CHOICEST STOCK IN THE
WORLD**

**HIGH QUALITY MODERN
HYBRIDS**

in a wider colour range than exists in any other
generic group of orchids.

**NO LESS THAN 68 AWARDS BY
THE ROYAL HORTICULTURAL
SOCIETY SECURED BY OUR
ODONTOGLOSSUMS AND ALLIED
GENERA SINCE 1948.**

We shall have the pleasure in quoting you in
these or other genera on advice of your
requirements to

CHARLESWORTH & Co. Ltd.
Haywards Heath, Sussex, England

The Orchid Society of N.S.W., Ltd.

Meets Last Monday: Y.W.C.A., Liverpool St., Opposite Anzac Memorial, Sydney

Patron: His Excellency, The Governor of New South Wales, Lieut. General
Sir ERIC WOODWARD, K.C.M.G., C.B., C.B.E., D.S.O.

President: Mr. FRANK SLATTERY, 12 Eddystone Road, Bexley, LY7985

Secretary: K. D. LAMONT, 42 Lawley Crescent, Pymble. Phone: JJ4744.

Hon. Treasurer: J. K. NICOLL, A.A.S.A., 2 Gibson Rd., Mosman. Phone: XM7600

Hon. Editors: G. H. Slade, Box 13, Homebush, N.S.W., A. B. Porter, 14 Henderson Rd.,
Eastwood; J. C. Davis, 16 Jarrett St., Campsie.

The Queensland Orchid Society

Meets Second Friday: Miniature Rifle Range Building, Boundary Street, Brisbane

President: E. A. KNOBLAUCH

Patron: Sir JOHN B. CHANDLER

Honorary Secretary: K. McKENRY, G.P.O. Box 2002X, Brisbane.

Hon. Treasurer: P. CURLEY

The Victorian Orchid Club

Meets Third Monday: The Victorian Horticultural Hall, Victoria St., Melbourne, at 8 p.m.

Patron: His Excellency The Governor of Victoria, General
Sir DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Patroness: Lady BROOKS

President: G. McCraith, 107 Roberts St., Essendon, W.5. Phone FX3570

Hon. Secretary: J. R. McARTHUR, 24 Somerset Rd., Glen Iris. Phone, BX1314

Hon. Treasurer: F. W. PADDOCK, 13 Thackray St., North Balwyn. Phone WL1666

The Orchid Club of South Australia

Meets First Thursday: Royal Society Rooms, Institute Building, North Terrace and
Kintore Ave., Adelaide.

Patron: The Hon. Sir THOMAS PLAYFORD, G.C.M.G., Norton Summit.

President: F. C. WOOD, 22 Stanley Street, Woodville.

Hon. Secretary-Treasurer: W. C. GILLESPIE, 6 East Terrace, Henley Beach. Phone 56.2744

The Orchid Society of Western Australia

Meets Fourth Friday, Adult Education Board Hall, 3 Howard St. Perth, at 7.45 p.m.

Patron: The Hon. Sir ROSS McLARTY, K.B.E., Pinjarra.

President: G. E. MARSHALL, 2 Russell Ave., North Perth.

Secretary: H. E. Foote, 12 Ryrie Ave., Como.

Treasurer: C. W. Connor, A.A.S.A., 42 Birkett Street, Bedford Park. Phone 71-3545

The Tasmanian Orchid Society

Meets Fourth Monday, 8 p.m., Wesley Hall, Melville St., Hobart.

Patroness: Lady Park. *President:* F. W. Chilvers. *Hon. Secretary:* B. R. Davis, A.C.A.
9 Chatsworth Street, Rose Bay. Phone: 2-9547

Armstrong & Brown

(Clint McDade U.S.A.—J. L. Humphreys)

TUNBRIDGE WELLS

ENGLAND

OFFER YOU:—

Fine stock in all genera.

SEEDLINGS bred from the finest parents in

Cymbidium

Cattleya & Allied Genera

Phalaenopsis

Cypripediums

Odontoglossums

Lists available on request.

SERVICE based on nearly sixty years of experience in raising, growing and shipping orchids to all parts of the world.

SATISFACTION in receiving well grown plants at very reasonable prices.

COURTESY in dealing with all enquiries.

ADVICE on all matters pertaining to Orchids and the cult.

CORDIAL WELCOME to all visitors.

Armstrong & Brown

ORCHIDHURST, SANDHURST PARK, TUNBRIDGE WELLS

Cables: Orchid, Tunbridge Wells.

Telephone: Southborough 276

ROYAL BOTANIC GARDENS MELBOURNE



RBGM00009745

